Hist. Div.
Biomed. Lib.
W
19
Y186p
1922

AA001186018 6
UC SOUTHERN REGIONAL LIBRARY FACILITY

YALE UNIVERSITY. SCHOOL OF MEDICINE

THE
PAST, PRESENT & FUTURE
OF THE
Yale University School of Medicine
AND
AFFILIATED CLINICAL INSTITUTIONS

INCLUDING

THE NEW HAVEN HOSPITAL
THE NEW HAVEN DISPENSARY
THE CONNECTICUT TRAINING SCHOOL
FOR NURSES

NEW HAVEN
PRINTED FOR THE UNIVERSITY
1922

MEDICINE is in such a rapid evolutionary state that a plan for to-day may be a parent or grandparent to-morrow. This has been singularly true of the developments which have taken place during the last few years at the Yale University School of Medicine, and its affiliated institutions. A summary of the past, lest we forget what has been done, and even more important, an outline of the future plans, as far as they have been developed, will, it is believed, be of interest to the friends of Yale and to all who are interested in the development of university medicine. These subjects will be presented in the following report as shown in the table of contents.

TABLE OF CONTENTS

Biomed
Hist. Div
W
19
Y186p
1922

Page
- Introduction . . . 2
- School of Medicine . . . 5
  - Government and Organization of the School . . . 5
  - The Student Body . . . 8
  - System of Grading . . . 8
- University Departments . . . 9
- Physical Unification of the School of Medicine . . . 12
- Instruction in the School of Medicine . . . 19
  - Anatomy . . . 19
  - Physiology . . . 22
    - Physical and Biological Physiology . . . 24
    - Chemical Physiology . . . 24
  - Pharmacology and Toxicology . . . 25
  - Department of Clinical Medicine . . . 26
  - Pathology and Bacteriology . . . 26
    - Introduction of Full-time Clinical Service . . . 28
    - Reorganization of the Administration of the Hospital . . . 29
    - The New Haven Dispensary . . . 32
      - The Appointment System . . . 33
    - Rehabilitation and Reconstruction at the Hospital with Increased Budget . . . 39
  - Internal Medicine . . . 50
  - Surgery . . . 52
  - Obstetrics and Gynecology . . . 56
    - The Service of a Woman's Clinic to the Community . . . 57
  - Pediatrics . . . 59
  - Public Health . . . 60
  - Graduate Instruction in Clinical Medicine . . . 62
    - Degree of Doctor of Philosophy . . . 63
    - Degree of Master of Science . . . 63

Page
Proposed Changes in the Curriculum of the Yale School of Medicine 64
  Reorganization of the Teaching of Pathology 66
  Changes in Clinical Teaching 68
  Nursing 69
Needs of the Medical School, Hospital, and Dispensary 72

CHARTS, DIAGRAMS, AND ILLUSTRATIONS

Cartoon Indicating the Situation of the School in 1920 7
Chart of University Organization 10
Buildings at 150 York Street; Exterior and Interior 13-14
Surgical Laboratory; 1907-1920 15
Brady Memorial Laboratory 16
Brady Laboratory Annex; Exterior and Interior 16-17
Nathan Smith Hall 18
Sterling Hall of Medicine; Front Elevation 20
New Laboratory for Medicine and Pediatrics 22
Diagram I, Hospital Construction (spring, 1921) 39
Diagram II, Hospital Construction (spring, 1922) 40
Diagram III, Ultimate Development in Hospital Construction 42
East Wards, Exterior and Interior Views, before Rehabilitation 43
East Wards, Exterior and Interior Views, after Rehabilitation 45
Chapel Serving as Emergency Ward 47
Isolation Building 48
Boardman Administration Building 49

YALE SCHOOL OF MEDICINE

GOVERNMENT AND ORGANIZATION OF THE SCHOOL

UNTIL 1884 the professors of the School of Medicine were elected according to the original charter by Yale University on nomination of the Connecticut Medical Society, but at this time, by means of an amicable agreement, the charter of the School was amended, placing it definitely in the University as one of its coördinate parts. Since then, the Faculty has been appointed, degrees granted, and funds administered solely by the University Corporation. The professors are nominated to the Corporation by the Board of Permanent Officers of the School, which consists of the directors of the nine primary departments, as indicated in the Chart of Organization. The appointment to the directorship of one of these primary departments is upon a life tenure basis. All other appointments are for a term of years. The appointment to a clinical chair carries with it, according to the contract entered into between the Hospital and the School, the position of Physician-in-Chief to the Hospital, and with it the privileges of using the clinical material for teaching. A similar arrangement exists with the New Haven Dispensary.

All major questions of policy and finance are determined by the Board of Permanent Officers. The larger body, known as the Faculty, deals with the curriculum, and has two important committees, one of the first and second years, the other of the third and fourth years, whose chief function is the grading of medical students. The Faculty has three scheduled meetings: one at the beginning of the academic year, one at the end of the first, and one at the end of the second term. It is almost impossible for meetings of so large a body to be anything but perfunctory, and to accomplish anything but routine business. Indeed it is undesirable to have detailed discussion concerning internal administration of a section or intersectional relations at a gathering of this type.

The policy of the School has been to obtain the best available man when a vacancy in the directorship of a section occurs, and to permit him to name his own staff, even associate and assistant professors. His budget is arranged through the Dean of the School, and all questions arising in an individual section should be settled by that section and not brought to the attention of other sections unless they are involved in the question. It has further been shown that even broader problems involving policy can best be solved through conference between the Dean and the heads of individual sections, and that in this way much less time is consumed than by the informal discussion usually indulged in when such problems are brought to the attention of a larger body. The Board of Permanent Officers of the School has scheduled monthly meetings during the academic year, but at the discretion of the Dean, such meetings may be omitted if no questions of urgency are at hand. It has been possible to eliminate at least half of the meetings of the Board of Permanent Officers.

With a complicated organization in an institution like the School of Medicine, there is a tendency to spend a great deal of time in administrative work, and with the changes that have occurred, and are contemplated for the immediate future, the Dean of the School unfortunately has to spend the major portion of his time and energy in other than scientific work. This in itself is serious enough, but if by so doing it is possible to reduce the time consumed in administrative work by the heads of departments and sections, and to salvage time for them for investigation and teaching, something at least has been attained. The time should come in the near future when a non-medical man, preferably one with a broad educational training, could assume most of the routine responsibilities of the Dean, and interest himself in the broader problems of medical education, which could be put to test in the School.

Although steps had been taken to reorganize and perfect the School of Medicine, for one reason or another, its status continued to be precarious up to 1920. It seemed very doubtful indeed whether the developmental program should be continued in its entirety; whether the School should continue to offer a four-year course; should devote itself fully to the first two years of the study of medicine; or should close its doors. This is amply borne out by the fact that approximately two years ago the Corporation of the University requested one of its members to make a survey of the School of Medicine. Upon the basis of this investigation the Committee on Educational Policy unanimously recommended the following policy, which was adopted by the Corporation:*

1. That there is a clear and definite opportunity and obligation of the University to Medical Education.

2. That the Yale School of Medicine has a valuable nucleus of men and material and sound traditions, which richly justify the development of an institution for medical education of the highest type.

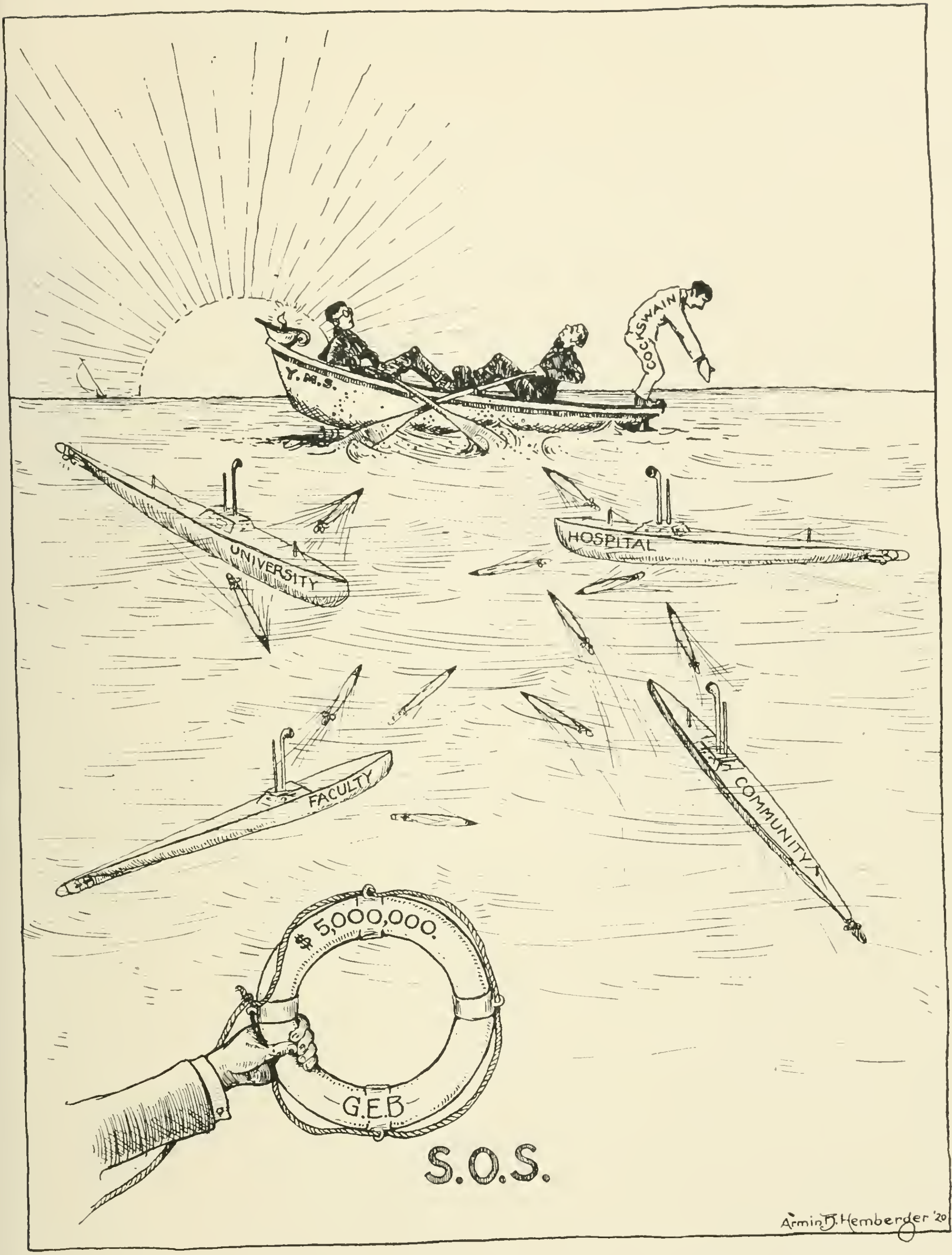
3. That the Corporation accept as a policy the development of a Medical School of the highest type to include the pre-clinical and clinical years of instruction upon such principles of medical education as may be approved by the Corporation, after conference with the Medical Faculty.

4. That every effort be made to obtain at the earliest possible date the necessary funds with which to expand and develop the buildings, the equipment, the instruction and the research, and the service, in accordance with the best ideals of modern medical education—as an essential unit of our University Plan of Development.

Needless to say, this expression of confidence and determination to carry on was the foundation stone for such subsequent development as has been effected. However, many of the men on the Faculty of

---

* From Report of the President, 1920, p. 125.



CARTOON INDICATING THE SITUATION OF THE SCHOOL IN 1920 the School of Medicine had already determined to sever their connection with the School. Almost every department needed reorganization in its personnel, improved, indeed radical, changes in physical facility, and decided increase in budget. The situation was expressed in part at least by the cartoon prepared in the spring of 1920.

THE STUDENT BODY

At the beginning of the 108th academic session in September, 1920, for the first time in many years, the number of applicants for admission to the School far exceeded the available positions: 56 candidates were selected from approximately 200 applicants. The following year 56 students were selected from 450 applicants. The present indications are that this situation will continue.

In definitely limiting the number of students admitted each year, the School of Medicine has adopted a policy which results in the most favorable conditions possible for the student. Each member of the staff has only a few students under his personal direction so that much individual, intensive work can be done which is impossible where classes are large.

SYSTEM OF GRADING

The Faculty considers course work of greater importance than examinations, and while examinations are held at the discretion of the instructor, the system of marking is a very simple one, and includes only "passed," "failed," and "passed with honor." In this relation the following comment upon American medical education by the University Grants Committee of Great Britain is of interest.

> But it is rare for a man to be set back for six months or a year, as when he is "ploughed" for his Intermediate in England, and still rarer for him to fail at the final examination. At one good school, the proportion of passes was put at 95%. This large proportion was due partly to the fact that the students at this school were carefully selected to begin with, and next, to the practice of sending away without scruple a student who did not promise well. As there were many more applicants than the school wished to take, it was in a position to make its own terms. The authorities argued that though tuition fees there are much larger than in England, a student always costs much more than he pays, so that the School is conferring a benefit when it admits him, and that a backward or an idle student so greatly hinders the work of his fellows, and so greatly increases that of his teachers that the school is better without him. They therefore discarded without scruple the men they did not want, and as early as possible. It is not exactly known what happens to rejected students. They probably go to some school that is less particular. To adopt this principle would greatly simplify the teaching problem at our medical schools.*

This principle is in vogue at the Yale University School of Medicine.

---

* Memorandum presented to the University Grants Committee by Sir Wilmot Herringham, K. C. M. G., and Sir Walter Fletcher, K. B. E., F. R. S., on return from a visit to the United States, May, 1921.

UNIVERSITY DEPARTMENTS

FUNDAMENTAL changes in the organization of departments of study of the University have materially affected the School of Medicine, and it is essential to outline the reorganization in the University before changes in the Schools can be fully appreciated. The principles involved are indicated in the Report of the President of the University for 1918-19:

> The members of the Faculty to be professors and instructors in Yale University, to serve where their powers are most needed, rather than to be men who owe primary allegiance to the several Schools, whose governing boards have nominated them.
>
> This will not result in the abolition of faculties or governing boards. The faculties and governing boards of the separate Schools will continue to be charged, as they now are, with arranging the requirements for the several degrees and determining how far the students have met these requirements. The faculties will determine the demand for instruction in the various Schools; but the supply of instruction in various lines will be furnished by the University; by professors and instructors in organized departments of study, whose personnel and whose laboratories will be available for the students that most need them, in whatever School they may happen to be enrolled.

As originally conceived in this reorganization, the School of Medicine requisitioned instruction from the following departments of study:

(1) Zoology; R. G. Harrison, Chairman.
(2) Physiology; R. H. Chittenden, Chairman.
(3) Medicine; George Blumer, Chairman.
(4) Public Health; C.-E. A. Winslow, Chairman.

Subsequent developments in the University and in the School of Medicine have changed the organization slightly and now the School of Medicine requisitions instruction from:

(1) Department of Zoology.
(2) Department of Anatomy.
(3) Department of Physiology.
(4) Department of Pharmacology and Toxicology.
(5) Department of Public Health.
(6) Department of Clinical Medicine.

This is clearly shown in the following Chart of Organization.

It must be emphasized that this educational organization does not necessarily determine budgetary organization, and although theoretically the School of Medicine should pay its proportion toward the expense of departments of study from which it requisitions instruction, naturally other considerations must arise to interfere with this arbitrary division of expenses. This will become obvious in the discussion of the various sections of the School of Medicine.

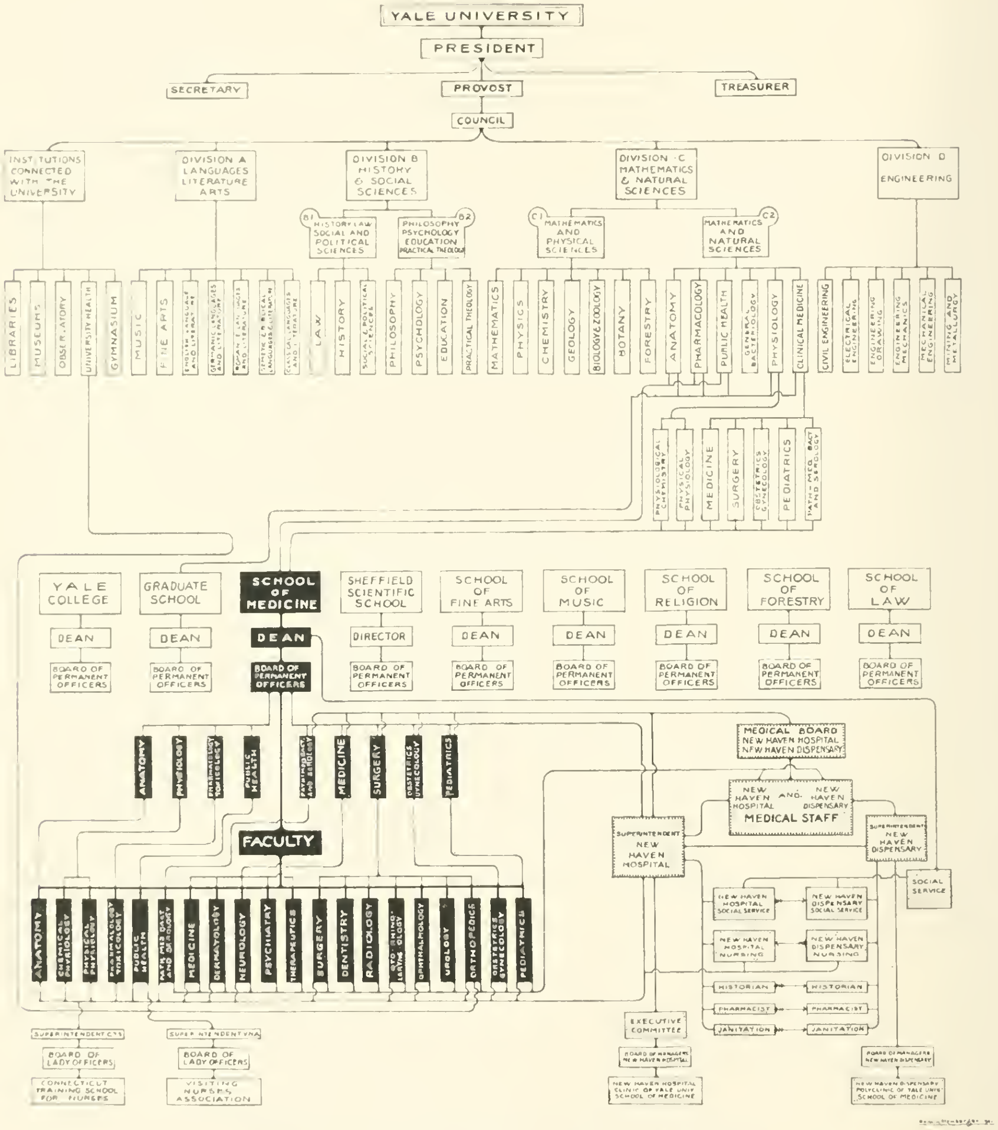

YALE UNIVERSITY
PRESIDENT
SECRETARY
PROVOST
TREASURER
COUNCIL
INSTITUTIONS CONNECTED WITH THE UNIVERSITY
DIVISION A LANGUAGES LITERATURE ARTS
DIVISION B HISTORY & SOCIAL SCIENCES
DIVISION C MATHEMATICS & NATURAL SCIENCES
DIVISION D ENGINEERING
B1 HISTORY LAW SOCIAL AND POLITICAL SCIENCES
B2 PHILOSOPHY PSYCHOLOGY EDUCATION PRACTICAL THEOLOGY
C1 MATHEMATICS AND PHYSICAL SCIENCES
C2 MATHEMATICS AND NATURAL SCIENCES
LIBRARIES
MUSEUMS
OBSERVATORY
UNIVERSITY HEALTH
GYMNASIUM
MUSIC
FINE ARTS
ENGLISH LANGUAGE AND LITERATURE
GERMANIC LANGUAGES AND LITERATURE
ROMANCE LANGUAGES AND LITERATURE
SEMETIC & BIBLICAL LANGUAGES & LITERATURE
CLASSICAL LANGUAGES AND LITERATURE
LAW
HISTORY
SOCIAL & POLITICAL SCIENCES
PHILOSOPHY
PSYCHOLOGY
EDUCATION
PRACTICAL THEOLOGY
MATHEMATICS
PHYSICS
CHEMISTRY
GEOLOGY
BIOLOGY & ZOOLOGY
BOTANY
FORESTRY
ANATOMY
PHARMACOLOGY
PUBLIC HEALTH
GENERAL BACTERIOLOGY
PHYSIOLOGY
CLINICAL MEDICINE
CIVIL ENGINEERING
ELECTRICAL ENGINEERING
ENGINEERING DRAWING
ENGINEERING MECHANICS
MECHANICAL ENGINEERING
MINING AND METALLURGY
PHYSIOLOGICAL CHEMISTRY
PHYSICAL PHYSIOLOGY
MEDICINE
SURGERY
OBSTETRICS GYNECOLOGY
PEDIATRICS
PATH.–MED. BACT. AND SEROLOGY
YALE COLLEGE
GRADUATE SCHOOL
SCHOOL OF MEDICINE
SHEFFIELD SCIENTIFIC SCHOOL
SCHOOL OF FINE ARTS
SCHOOL OF MUSIC
SCHOOL OF RELIGION
SCHOOL OF FORESTRY
SCHOOL OF LAW
DEAN
DIRECTOR
BOARD OF PERMANENT OFFICERS
ANATOMY
PHYSIOLOGY
PHARMACOLOGY TOXICOLOGY
PUBLIC HEALTH
PATH. MED. BACT. AND SEROLOGY
MEDICINE
SURGERY
OBSTETRICS GYNECOLOGY
PEDIATRICS
FACULTY
ANATOMY
CHEMICAL PHYSIOLOGY
PHYSICAL PHYSIOLOGY
PHARMACOLOGY TOXICOLOGY
PUBLIC HEALTH
PATH. MED. BACT. AND SEROLOGY
MEDICINE
DERMATOLOGY
NEUROLOGY
PSYCHIATRY
THERAPEUTICS
SURGERY
DENTISTRY
RADIOLOGY
OTO-RHINO-LARYNGOLOGY
OPHTHALMOLOGY
UROLOGY
ORTHOPEDICS
OBSTETRICS GYNECOLOGY
PEDIATRICS
MEDICAL BOARD NEW HAVEN HOSPITAL NEW HAVEN DISPENSARY
NEW HAVEN HOSPITAL AND NEW HAVEN DISPENSARY MEDICAL STAFF
SUPERINTENDENT NEW HAVEN HOSPITAL
SUPERINTENDENT NEW HAVEN DISPENSARY
SOCIAL SERVICE
NEW HAVEN HOSPITAL SOCIAL SERVICE
NEW HAVEN DISPENSARY SOCIAL SERVICE
NEW HAVEN HOSPITAL NURSING
NEW HAVEN DISPENSARY NURSING
HISTORIAN
HISTORIAN
PHARMACIST
PHARMACIST
JANITATION
JANITATION
EXECUTIVE COMMITTEE
BOARD OF MANAGERS NEW HAVEN HOSPITAL
NEW HAVEN HOSPITAL CLINIC OF YALE UNIV. SCHOOL OF MEDICINE
BOARD OF MANAGERS NEW HAVEN DISPENSARY
NEW HAVEN DISPENSARY POLYCLINIC OF YALE UNIV. SCHOOL OF MEDICINE
SUPERINTENDENT C.T.S.
BOARD OF LADY OFFICERS
CONNECTICUT TRAINING SCHOOL FOR NURSES
SUPERINTENDENT V.N.A.
BOARD OF LADY OFFICERS
VISITING NURSES ASSOCIATION

CHART OF UNIVERSITY ORGANIZATION

It was somewhat difficult at first to readjust the work of an individual School in conformity with the reorganization in the University. As time has gone on, however, it has become more and more obvious that the centralization of a specific activity, including centralization of budget, personnel, and duties, in a given subject, has greatly increased the efficiency of the various sections in the Medical School.

Furthermore the development of future Schools in the University is greatly facilitated by its fundamental organization. For example, a School for Nurses could be organized with great ease. It would requisition instruction from existing departments as follows:

(1) English.
(2) Social and Political Science.
(3) Philosophy.
(4) Education.
(5) Chemistry.
(6) Zoology.
(7) Pharmacology and Toxicology.
(8) Physiological Sciences.
(9) Clinical Medicine.

As pointed out below the practical equivalent of a very effective School of Public Health has already been organized in this way as a Department of the Graduate School, requisitioning instruction from various existing departments of the University, but under the direction of the professor of public health of the School of Medicine.

PHYSICAL UNIFICATION OF THE SCHOOL OF MEDICINE

IT has long been recognized by medical educators that the fundamental pre-medical sciences should be housed in geographic proximity to the clinical sections of the School of Medicine. In fact this question is being agitated to-day in several of the larger universities located in small towns, where the clinical material is scant, and where, as a consequence, it has been proposed to confine the course at the university to the first two years of medicine, and transfer the clinical teaching to nearby but more populous cities. Wherever a decision has been reached, the obvious advantages of a university atmosphere, and geographic unification for the school, have outweighed other considerations. Indeed there is ample evidence that scholarship and production at the school of medicine in the small university town may excel that of the metropolitan institution, and the evidence in favor of close proximity between the clinical and pre-clinical sections of the school is equally strong.

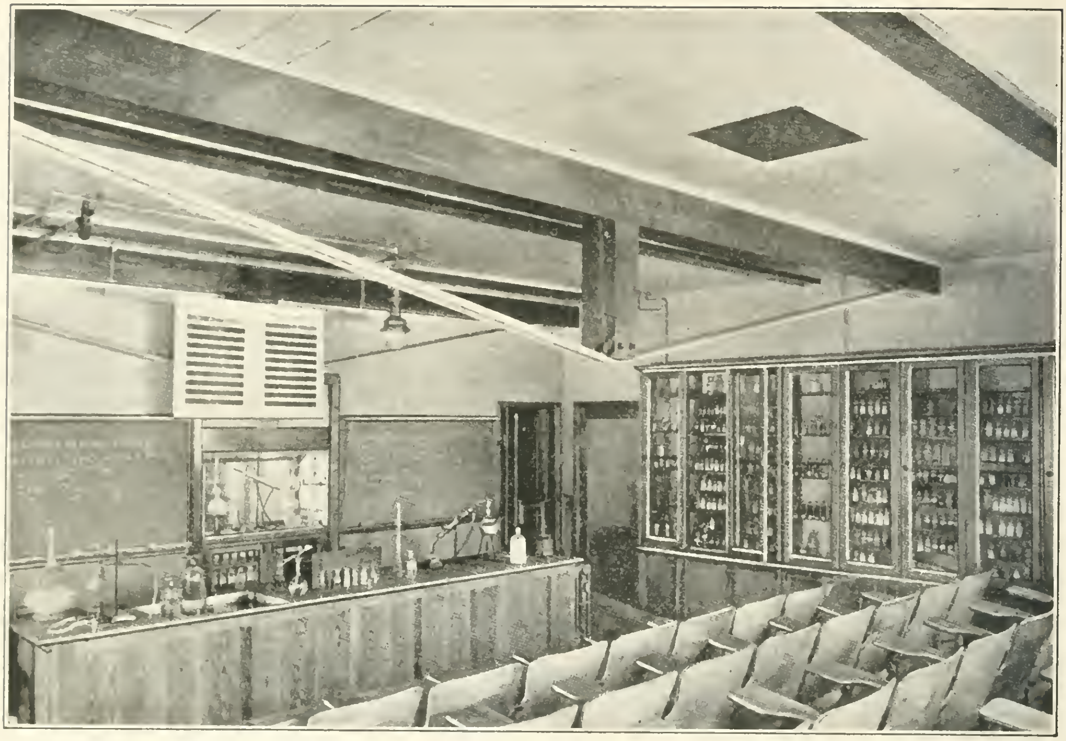
At Yale, the physical facilities for both clinical and pre-clinical sections of the School have not only been inadequate but have been located in widely different sections of the city. Medicine was first taught in the old South Sheffield Hall, and then about 1860 the School was moved to a dwelling house at 150 York Street. It rapidly outgrew the facilities offered by these premises, and about 1890 an additional building was erected on a lot in the rear of the dwelling house, at a cost of approximately $30,000. This building is a brick shell with suspended ceilings. Both of these buildings became inadequate, and in 1907 a cottage opposite the New Haven Hospital was rehabilitated and adapted as a laboratory for Medicine, Surgery, and Obstetrics and Gynecology. In the rear of this cottage, a two story brick structure was erected for animal experimentation and classwork. In 1917 the Anthony N. Brady Memorial Laboratory was completed. It made possible the affiliation between the New Haven Hospital and the Yale University School of Medicine, and was designed to house Pathology and Bacteriology. This building has also provided quarters, inadequate to an extreme, for laboratory study in all of the clinical branches. In 1918 a brick building, a quarter of a mile from the Hospital, was purchased by the University to permit necessary expansion in the investigation of war gases, which was being conducted by a group of officers from the Medical School. At the close of the war, the building was renamed Nathan Smith Hall and now houses Applied Physiol-

150 YORK STREET · ANATOMY

ogy, under Professor Henderson of the Graduate School; Public Health, under Professor Winslow of the Medical and Graduate Schools; and Physical Physiology, under Professor Laurens of the Medical School. A second building was provided for the Medical School during the war in the form of a barrack, to house the Yale Army Laboratory School. This building has been readapted so that one wing, approximately 250 x 36 feet, contains laboratories for the Department of Surgery, under Professor Harvey; the other wing, 100 x 36 feet, is used for a classroom for Pathology, Bacteriology, and Clinical Microscopy, as well as for conferences and lectures.

To summarize, the original old building at 150 York Street is now used entirely for Anatomy. The facilities in this building are too meagre even for this subject, and with the increased number of students, it has been necessary for Anatomy to expand and occupy approximately two thirds of the brick shell erected in 1890 on the lot in the rear of this old building.

Chemical Physiology is taught in the rehabilitated dwelling house at 2 Hillhouse Avenue. Pharmacology occupies the lower floor of the rear building at 150



REAR BUILDING, 150 YORK STREET · HISTOLOGICAL LABORATORY

York Street, and half of the upper floor of the Brady Memorial Laboratory, one mile away.

Physical Physiology and Public Health are located in Nathan Smith Hall.

Pathology and Medical Bacteriology, Serology, Obstetrics and Gynecology, Medicine and Pediatrics are crowded in the Brady Laboratory, and use as a classroom one wing of the Brady Annex, while Surgery occupies the other wing.

Sweeping changes are contemplated and indeed steps have been taken to assure much more adequate facilities both for the pre-clinical and clinical sections of the School of Medicine. The vote of the Corporation of November 13, 1920, reads as follows:

That the permanent University laboratories of Physiology, Pharmacology, and Anatomy be located in connection with the group of Medical School buildings near Cedar Street, as soon as funds can be provided.

Subsequently, the following vote was made by the Prudential Committee of the Corporation:

That it request the Sterling Trustees to set aside $1,320,000 for a Medical School building, this amount to include fixed equipment and architect's fees, with the understanding that the amount of the maintenance fund will be determined later.

The request of the Prudential Committee of the Corporation was approved by the Corporation and received favorably by

321 AND 323 CEDAR STREET
LABORATORIES OF SURGERY, MEDICINE, OBSTETRICS AND GYNECOLOGY
(1907-1920)

the Sterling Trustees. Already plans have been completed for a modern, fireproof structure on the plot of ground opposite the Anthony N. Brady Memorial Laboratory and the New Haven Hospital. The façade of this proposed building is shown on a following page. The building may be divided roughly into five parts:

(1) The Central Building.
(2) The Broad Street Wing.
(3) The Cedar Street Wing.
(4) The Animal House.
(5) The Power House.

The contemplated use of these five parts of the building follows:

CENTRAL BUILDING: This will provide

1. A library with space for approximately 12,000 volumes.

2. An amphitheatre to seat approximately 250 people.

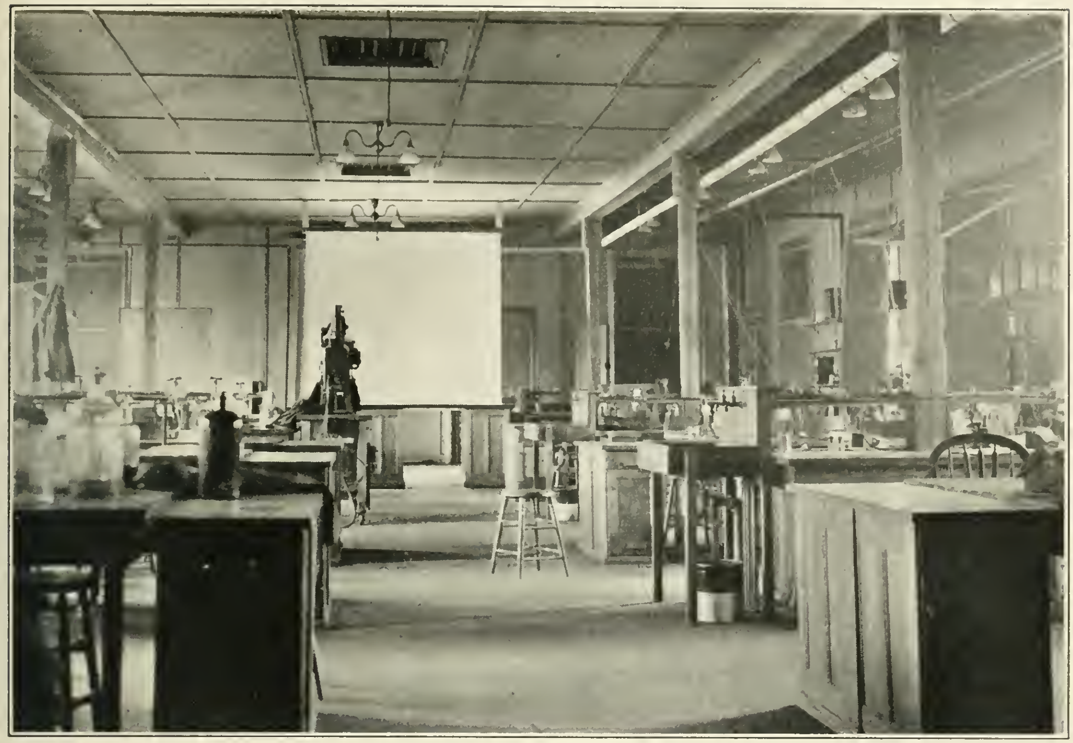
3. Lavatories and locker rooms for men and women.

4. Administration offices for the Dean and Registrar, Faculty Room, and Students' Common.

BROAD STREET WING: The basement

THE ANTHONY N. BRADY MEMORIAL LABORATORY · PATHOLOGY AND BACTERIOLOGY

BARRACK, BRADY LABORATORY ANNEX



INTERIOR OF BARRACK

and first floor of this wing provide laboratory space for the Department of Physical Physiology; the second and third floors for the Department of Pharmacology and Toxicology.

CEDAR STREET WING: The basement and first floor provide laboratory space for the Department of Physiological Chemistry, or Chemical Physiology; the second and third floors for Anatomy.

ANIMAL HOUSE: This will be in the center of the ultimate rectangle and will be available for all of the departments of the University located in the vicinity of the Hospital.

POWER HOUSE: This is designed on the unit basis with bunkers and stack large enough to permit the addition of more units to meet the ultimate needs of the School and Hospital. Aside from this building for the preclinical subjects, a new laboratory, made possible by a grant from the General Education Board in the spring of 1920, is nearly completed on the hospital site for the clinical sections of Medicine and Pediatrics.

In a short time, therefore, there will be admirable facilities for Anatomy, Physiology, and Pharmacology in the new Sterling Hall of Medicine. Pathology and Bacteriology will then expand, and except for classrooms, museum, and amphitheatre, will be well cared for in the Anthony N. Brady Memorial Laboratory.

These physical changes, in progress and projected for the immediate future, will unify the School of Medicine and bring

NATHAN SMITH HALL · PUBLIC HEALTH (ACQUIRED IN 1918)

the various sections of the School geographically close together. Public Health alone will remain in Nathan Smith Hall, at a distance of about a quarter of a mile. Details of the changes accomplished or still needed in the Hospital plant for the efficiency of the Clinical Sections, will be discussed later.

INSTRUCTION IN THE SCHOOL OF MEDICINE

THE School of Medicine as at present organized consists of the following fundamental sections or departments, which will be considered individually. The relation of University departments to the School sections is shown below.

University Departments of Study.	*Sections of the School of Medicine.*
(1) Zoology.	Anatomy (affiliated with Zoology).
(2) Physiology; chemical, physical, and biological.	Physiology.
(3) Pharmacology and Toxicology.	Pharmacology and Toxicology.
(4)	Public Health.
	(a) Pathology and Bacteriology.
	(b) Internal Medicine.
(5) Clinical Medicine.	Clinical Medicine: (c) Surgery.
	(d) Obstetrics and Gynecology.
	(e) Pediatrics.

ANATOMY

Professor Harry Burr Ferris, Chairman.
Professor Ross Granville Harrison.
Assistant Professor Harold Saxton Burr.
Leon Stansfield Stone, Instructor.
Francis Huntington Swett, Instructor.
Harlan B. Perrins, Assistant.
Harry Hilts Maynard, Assistant.

Human Anatomy is by custom and precedent an entity; in reality, however, it is simply a phase of Biology in which the structure of man should be studied in its general biological relationships, especially that of Comparative Anatomy. From the standpoint of University organization, therefore, it would be feasible to create one department of Biology, to include Human Anatomy, and in theory this has been done. In fact, however, there are many obstacles to such a complete reorganization. The University Department of Zoology was reorganized when the Osborn Zoological Laboratory was completed in September, 1913. This building offers splendid facilities for the extensive teaching of undergraduate and graduate students in these subjects, but it is not

THE STERLING HALL OF MEDICINE

large enough to house the teaching of Human Anatomy. Moreover, it is located at such a distance from the clinical sections of the School of Medicine, that the officers of the School have constantly opposed the transfer of Human Anatomy to the Osborn Zoological Laboratory. As has been detailed above, in the section on building, Anatomy will be housed in the new Sterling Hall of Medicine. It is sincerely hoped that the question of physical division between Zoology on the one hand, and Human Anatomy on the other, is not settled for all time, and that eventually these will be united with the other biological sciences in the neighborhood of the School of Medicine.

In the meantime, the closest possible affiliation exists between the University Department of Zoology and the Section on Human Anatomy of the School of Medicine. Professor Harrison, Chairman of the Department of Zoology, as well as Professor Ferris, Chairman of the Section on Human Anatomy, are members of the Board of Permanent Officers of the School of Medicine, and former, as well as present, members of the staff of the Department of Human Anatomy are students of Professor Harrison. Indeed many of the instructors in the Department of Anatomy have continued to carry on investigative work in General Biology, initiated while they were still graduate students. The affiliation is further fostered inasmuch as medical students are urged to take courses in comparative morphology of vertebrates, experimental embryology, etc., at the Osborn Zoological Laboratory, and graduate students in zoology avail themselves of the courses in anatomy in the Medical School. It is planned to enlarge the scope of graduate study in biology and permit, in fact urge, the student to take further work in the pre-clinical medical sciences in order to prepare himself better for the teaching of human anatomy in medical schools. This is a field full of opportunity at the present time, and a fear has been generally expressed throughout the medical community concerning the dearth of candidates for available and really good positions.

The Section on Human Anatomy has been hampered through inadequate physical facilities and relative isolation, both from the clinical sections of the School of Medicine, and from the pure science departments of the University. This latter handicap has been serious, but even more so has been an inadequate budget. During the past two years, however, the budget has been increased materially. It should soon be possible for Professor Ferris to obtain an adequate staff to conduct the many courses given by his section, and still leave sufficient time for the instructors to carry on investigative work more efficiently than has been possible in the past.

The courses of study offered in Anatomy are as follows:

The required courses in Anatomy extend through the first year. These are chiefly laboratory courses under the supervision of instructors, with conferences correlated with the laboratory work. Attention is given to surface form, regional and relational anatomy, as well as to the structure and development of the various tissues and organs. The conferences in all courses are informal in nature and designed to develop the power of the student in expressing his knowledge, and to broaden his views by discussions relating to the comparative and general morphology of the parts and the bearing of recent literature. Seminar work is required. The examinations are both practical and written.

Beginning with the second year, the student may elect one or more additional courses in dissection or take any of the electives in Anatomy. The electives are designed for those students wishing to become especially proficient in Anatomy, or those intending later to enter the medical specialties. Qualified students are encouraged in some original research.

Anatomy 1: The Upper Extremity.†
Anatomy 2: The Head and Neck.
Anatomy 3: The Thorax.
Anatomy 4: The Abdomen and Pelvis.
Anatomy 5: The Lower Extremity.
Anatomy 6: Microscopic Anatomy.
Anatomy 7: Embryology.
Anatomy 8: Central Nervous System.
Anatomy 9: Topographic and Applied Anatomy.
*Anatomy 10: Nose.
*Anatomy 11: Histological Technique.
*Anatomy 12: Eye.
*Anatomy 13: Ear.
*Anatomy 14: Advanced Embryological Technique.
*Anatomy 15: Dissection.
*Anatomy 16: Research.
*Anatomy 17: Seminar and Journal Club.
*Anatomy 18: Morphology of Vertebrates.
*Anatomy 19: Experimental Zoology; (a) Experimental Embryology.

---

† Detailed description of the courses of instruction may be found in the Catalogue of the School of Medicine.

* Anatomy—indicates elective courses in Anatomy.

NEW LABORATORY FOR MEDICINE AND PEDIATRICS

PHYSIOLOGY

Professor LAFAYETTE BENEDICT MENDEL, Chairman, University Department of Physiological Sciences.

Associate Professor HENRY LAURENS.

WILLIAM FERGUSON HAMILTON, Instructor.

EDITH LOWMAN, Assistant.

CHEMICAL PHYSIOLOGY

Professor LAFAYETTE B. MENDEL.

ARTHUR HENRY SMITH, Instructor.

THE reorganization of the University on the departmental basis has aided the Medical School very materially in effecting changes in the Section on Physiology. Owing to the fact that a strong department of Physiological Chemistry had been developed in the Sheffield Scientific School, it was impossible to organize this subject in the School of Medicine, and even though the great majority of students in Physiological Chemistry represented the School of Medicine, there were no faculty contacts between this School of the University and the Department of Physiological Chemistry of the Sheffield Scientific School.

Some years ago, an attempt was made to create a staff for the teaching of Physiological Chemistry in the School of Medicine, and a splendidly trained physiological chemist was added to the staff, under the title of Professor of Pathological Chemistry. In this way, a contact was established with the teaching laboratories of Physiological Chemistry, through a very roundabout and inadequate manner, and inasmuch as this instructor remained in the Sheffield laboratories, separated from the other pre-clinical departments, as well as the clinical departments of the School of Medicine, little was accomplished. When his activities were transferred at a later date to the Brady Laboratory and he ceased to give instruction in Physiological Chemistry, the object that had been sought in the creation of his position in the School of Medicine was entirely vitiated, and the activities of the Professor of Pathological Chemistry, his staff and budget, were utilized in clinical chemical study forming a Department of Experimental Medicine.

In the meantime, the usual course in physiology, chiefly physical physiology, had been firmly established as a department of the School of Medicine. This department, like the others, had very inadequate facilities of all kinds, physical, budgetary, and in personnel, to carry on its work. Nevertheless it fostered a subsidiary Department of Pharmacology, consisting at first of a junior assistant; later of an assistant professor with a single instructor. These two men utilized a portion of the inadequate quarters of this department, and, with a very meagre budget, offered courses and carried on very creditable investigative work. The physiological sciences, therefore, in the School of Medicine, were represented as follows:

(1) Chemical Physiology or Physiological Chemistry was taught by members of the staff of the Sheffield Scientific School in laboratories of the Sheffield Scientific School, with no supervision from or contact with the Faculty of the School of Medicine.

(2) Physical Physiology was taught in a department in the School of Medicine.

(3) Biological Physiology was not represented in the School of Medicine, but was developing in the University Department of Zoology.

(4) Pharmacology was a subsection of the Department of Physiology of the School of Medicine.

(5) The only well equipped chemical physiologist on the Faculty of the School of Medicine was the Professor of Pathological Chemistry, later Professor of Experimental Medicine, who was without responsibility for a major subject in the School.

Out of this chaos, there emerged the University Departments of Physiology and Pharmacology and Toxicology, both to be housed in the new Sterling Hall of Medicine, as has been detailed above.

The University Department of Physiology, with Professor Mendel as chairman, at present has two distinct subdivisions; chemical, and physical and biological. It is hoped that a third distinct subdivision will be created in the immediate future, when the physical and biological aspects of physiology are separated and given more adequate support. Until the present, physiology has been very arbitrarily divided in most institutions. In many schools, the chemical aspects, under the caption of Physiological Chemistry or Biochemistry, are considered separately by an independent group of the Faculty, and other phases of physiology have been amplified into one or more separate departments with no relation to each other. This naturally has resulted in a great deal of repetition in teaching, in unnecessary lengthening of the curriculum, and confusion to the student. With the accession of interest in chemistry, physical physiology has been neglected; and this aspect of the subject, which developed to a considerable extent in the United States during the past twenty-five years, is to-day followed by few, while the biological aspects of physiology have been carried on entirely by biologists; and the results of their investigations, on account of relative inaccessibility, are almost unknown to the average physiologist or physician, and, therefore, not readily adapted to human physiology. It is not the intention to establish all three of these phases of physiology on an equal basis, but an attempt will be made to have all three represented, and to facilitate their work as needs demand and opportunity offers. There seems to be no more reason for the separation of these phases of physiology than there is for the separation, in the same clinic, of the chemical, physical, and biological aspects of internal medicine. Indeed it is a question whether pharmacology, which utilizes the methods represented in the various phases of physiology, should be separated entirely and duplicate, as it must necessarily do, a great deal of equipment, if it is considered as a separate department. Questions of this type, however, cannot be settled arbitrarily, and existing circumstances may be determining forces, as they have been here.

The courses of study offered in Physiology are as follows:

PHYSICAL AND BIOLOGICAL PHYSIOLOGY

The instruction in this department is arranged for the second year, and is given in the Laboratory for Physical and Nervous Physiology in Nathan Smith Hall. This laboratory is equipped for individual work by the student in the experimental phenomena of Physical Physiology. After pursuance of the regular course, students may elect advanced work and may pursue research work under the guidance of an instructor as a basis for the graduation thesis.

Physiology 1: Physical and Nervous Physiology.

Physiology 2: Physical and Nervous Physiology.

Physiology 3: Research Work in Physical and Nervous Physiology.

Physiology 4: Physiological Seminar.

Physiology 5: Comparative Physiology.

CHEMICAL PHYSIOLOGY

These courses are given in the Sheffield Laboratory of Physiological Chemistry in the Sheffield Scientific School.

Physiological Chemistry 1: Physiological Chemistry.

Physiological Chemistry 2: Physiology of Nutrition.

*Physiological Chemistry 3: Physiological Chemistry (advanced).

*Physiological Chemistry 4: Seminar.

*Electives.

PHARMACOLOGY AND TOXICOLOGY

Professor Frank Pell Underhill, Chairman.

Charles Hugh Fee, Instructor.
Erwin George Gross, Instructor.
George Thomas Pack, Instructor.
Alice Dimick, Assistant.
Florence Irene Peterman, Assistant.

As has been recounted above, pharmacology has never had proper recognition. It was a minor section of Physical Physiology, and while this affiliation in itself was not a fault, with inadequate housing and budget in the Department of Physiology, naturally the subsection of pharmacology could not be properly supported. In view of the difficulties of the situation the work of this small subsection has been remarkable and extremely commendable. The pharmacologist utilizes the methods of the chemical and physical physiologist especially, and the division between pharmacology and physiology may be considered by some as arbitrary. The situation in the School of Medicine was a peculiar one. There had been a Department of Pathological Chemistry, whose teaching function was associated with Physiological Chemistry or Chemical Physiology. This department later became known as the Department of Experimental Medicine, and continued the teaching of quantitative physiological chemistry from the clinical point of view. With the reorganization of the Section on Internal Medicine, it became obvious that no arbitrary division of Internal Medicine and Experimental Medicine could be made, and while the situation had been felicitous in the past, it promised to offer great difficulties in the future. Furthermore, the officers of the School of Medicine have been firmly of the opinion that no accessory sections should be established until fundamental sections were well organized, well housed, and satisfactorily financed. Therefore, pharmacology, which had been a subsection of physiology, and experimental medicine, an accessory department, were united to form a strong Department of Pharmacology and Toxicology. For the immediate future, it will be necessary to continue the old arrangement and to have the work of this Department carried on in two separate places, but this will be remedied as soon as the new Sterling Hall of Medicine is completed.

The courses of study in Pharmacology and Toxicology are as follows:

The Department of Pharmacology and Toxicology is temporarily located in the Laboratory Building on York Street and on the third floor of the Brady Memorial Laboratory on Cedar Street. The work in this Department is so planned that the student is required to take a general course in Pharmacology and Toxicology in order to fulfill the requirements essential for the degree of Doctor of Medicine. In addition, there are offered a number of elective courses designed to furnish the student with a broad foundation in the principles of Pharmacology and Toxicology. A course in the newer methods applicable to clinical or experimental problems is also given. To the subject of the study of poisons particular attention is devoted. Special and individual attention is available for those students interested in investigation.

Pharmacology 1: Pharmacology and Toxicology.

*Pharmacology 2: Special methods in research.

*Electives.

* Pharmacology 3: Experimental Pharmacology.

*Pharmacology 4: Toxicology, chemistry of drugs and poisons.

*Pharmacology 5: Toxicology.

*Pharmacology 6: Chemical structure and physiological action.

*Pharmacology 7: General Pharmacology.

*Pharmacology 8: Pharmacological Seminar.

*Pharmacology 9: Research.

DEPARTMENT OF CLINICAL MEDICINE

This department of study in the reorganization of the University includes the following sections of the School of Medicine:

(1) Pathology, Bacteriology, and Serology.
(2) Internal Medicine.
(3) Surgery.
(4) Obstetrics and Gynecology.
(5) Pediatrics.

These will be referred to below as individual sections of the School of Medicine, as distinct from University Departments. Together, they form a Department in the Graduate School, and offer courses leading to the degree of Master of Science, or Doctor of Philosophy, as described on pp. 62-63.

PATHOLOGY AND BACTERIOLOGY

Professor Milton Charles Winternitz, Chairman.

Assistant Professor George Hathorn Smith.

Assistant Professor Robert Archibald Lambert.

Elliott Stirling Robinson, Instructor.

Isabel Mary Wason, Instructor.

Michael Joseph Conroy, Assistant.

Joseph Theodore Eagan, Assistant.

Everett Shovelton Sanderson, Assistant.

Woodruff Smith, Assistant.

Helen May Scoville, Assistant.

This section of the School of Medicine was reorganized in 1917. Until then, a practicing clinician had been the head of the Department. The reorganization was made possible by the generous gift of the family of Anthony N. Brady, which enabled the University to build a modern laboratory on the grounds of the New Haven Hospital, thereby bringing about a closer affiliation of the Yale University School of Medicine with the New Haven Hospital. The Anthony N. Brady Memorial Laboratory is a modern building in every respect, planned on the Minot unit system. It houses at present not only laboratories of Pathology and Bacteriology, but also laboratories for Pharmacology, Medicine, Obstetrics and Gynecology, and Pediatrics, as well as the administrative offices of the School. This congestion will be greatly relieved as soon as the new Sterling Hall of Medicine is erected, and even before this, when the laboratory for the clinical sections of Medicine and Pediatrics is completed. Indeed in the not distant future, the sections on Pathology and Bacteriology will be the sole occupants of the building; and even then with the expansion in these subjects, the facilities will not be entirely adequate inasmuch as the amphitheatre for post-mortem examinations is incompatible with instruction of classes of fifty students, and there are neither lecture rooms nor classrooms of sufficient size for the teaching which must be carried on by these sections. When this section of the School was reorganized no personnel was at hand, and only a minimal amount of equipment was derived from the old department, which had been located with the other pre-clinical branches of the School of Medicine at 150 York Street. The equipment at hand, housed in a most inadequate laboratory in the basement of the hospital where Pathology and Bacteriology for this institution was carried on, was negligible. Therefore, aside from considerable anatomical material, almost inaccessible on account of inefficient methods of preservation and classification, the total assets of the new section were a series of rooms and a budget, which, thanks to the liberality of the University, were satisfactory to properly organize the work.

The problem which had to be confronted was to obtain equipment and an adequate staff. This task, difficult enough under normal conditions, was very materially increased and in some cases made impossible until after the war. Fortunately the reorganization had proceeded far enough before the summer of 1920 so that the work of the section could be efficiently carried on in spite of the assumption of the administrative duties of the School, at this time, by the Chairman.

This, however, was not the only difficulty. For a long time, there has been a section of General Bacteriology in the Sheffield Scientific School, and together with the Department of Public Health in the School of Medicine, these two sections have formed a Department of the Graduate School, under the caption "General Bacteriology and Public Health." The laboratory of this section of the Sheffield Scientific School is located in Sheffield Hall. The staff is small, and the amount of teaching which they have conducted in the past has been very great. The courses in General Bacteriology have been made available to undergraduate students of both the Sheffield Scientific School and the College, and most of the students preparing for the study of medicine have included this course in their pre-medical work. Until 1917 many students in the School of Medicine took the course in General Bacteriology in the Sheffield Scientific School as "combined course" students. Aside from this undergraduate and Medical School teaching, the section of General Bacteriology offered many courses in the Graduate School. These included frank graduate work in Bacteriology, as well as courses adapted for the needs of the student in Public Health. With the University reorganization, the section of Bacteriology of the Sheffield Scientific School has been combined with the University Department of Physiology. There is at present a teaching laboratory of Bacteriology associated with the Department of Public Health. This laboratory, however, is largely for investigative study by the students enrolled for the various degrees in Public Health. There is a second laboratory in Sheffield Hall for General Bacteriology, besides the laboratory of Medical Bacteriology and Serology in the Anthony N. Brady Memorial Laboratory.

Obviously this situation is not in accord with the University plan to create departments of study, and several solutions suggest themselves:

(1) Bacteriology can be made a separate department of study of the University and include not only General Bacteriology, Bacteriology of Public Health, and Medical Bacteriology, but also Serology, which forms such an important part of the work at the School of Medicine.

(2) Bacteriology can be united with Public Health as a department of study.

(3) Pathology and Bacteriology in the School of Medicine can be separated from the Department of Clinical Medicine and enlarged to include General Bacteriology and Bacteriology of Public Health.

(4) Bacteriology, Pathology, and Public Health can be united in a University department.

The reorganization of groups of study elsewhere in the University has been so effective that it seems advisable to extend it to Bacteriology.

The courses of study offered by the Section of Pathology and Bacteriology under discussion, which is part of the University Department of Clinical Medicine, follow:

The Anthony N. Brady Memorial Laboratory provides facilities for instruction in Bacteriology and Pathology. The required course in Bacteriology is given during the last half of the first year and those in Pathology and Medical Bacteriology during the first half of the second year. Optional courses for advanced study and research are offered in both subjects to students who have had the necessary preliminary training and to graduates in medicine.

In each of the required courses emphasis is placed upon the laboratory work, which is supplemented by lectures, demonstrations, and recitations.

Pathology and Bacteriology 1. Elementary Bacteriology.

Pathology and Bacteriology 2. Conduct of Autopsies.

Pathology and Bacteriology 3. Demonstration in Gross Morbid Anatomy.

Pathology and Bacteriology 4. General Pathology including Gross and Microscopic Pathological Anatomy.

Pathology and Bacteriology 5. Medical Bacteriology.

Pathology and Bacteriology 6. Histological Technique.

Pathology and Bacteriology 7. Recitations.

Pathology and Bacteriology 8. Immunology.

Pathology and Bacteriology 9. Clinical and Pathological Conference.

Except for the Section of Pathology and Bacteriology, the Department of Clinical Medicine of the University is composed exclusively of clinical branches. These have, as a part of their laboratories, the wards of the Hospital and the rooms of the Dispensary.

Inasmuch as the associations of instruction in the Clinical Sections of the School of Medicine are so intimately connected with the organization of the New Haven Hospital, it may be advisable to defer detailed consideration of these Sections until a discussion of the Hospital has been presented.

Great as the changes in the pre-clinical subjects have been, those of the clinical sections have been vastly greater, and have included:

(1) Introduction of full-time clinical service.

(2) Reorganization of the administration of the Hospital.

(3) Reorganization of the New Haven Dispensary and its affiliation with the New Haven Hospital.

(4) Rehabilitation and reconstruction at the Hospital with an increased budget.

INTRODUCTION OF FULL-TIME CLINICAL SERVICE

The establishment of the clinical sections of the School of Medicine on a University basis is the natural outcome of development in the pre-clinical sciences, just as the establishment of the pre-clinical sciences on a University basis was the natural outcome of development in the pure sciences.

There were, it is true, other reasons for the institution of full-time Clinical Medicine, as it was termed, though it is believed this term is a misnomer, but it seems fair to assume that even without these other reasons the Clinical Sections of the leading schools of the country would have naturally adopted a university basis as Medicine became more and more a science and less and less an art. With the stabilization of the pre-clinical sciences, methods of clinical investigation became more and more numerous, so that to-day the individual man in health and disease, mentally as well as physically, must be considered as an entity, reacting differently to normal as well as abnormal stimuli and responding differently to preventive and curative therapy. As a consequence the clinician must have available facilities for the physical, chemical, and psychic study of the individual. Such facilities can only be provided at relatively large cost and include extensive laboratories for the clinic (hospital) and polyclinic (dispensary). It is unfortunate that this expansion in clinical medicine should have come at a time when there was a great contraction in the purchasing power of the dollar and probably on this account, more than any other, although the post-bellum psychology has played a rôle, University Medicine has met with great obstacles in its development. In the first instance, it has been difficult to obtain the personnel for such University departments. It has been difficult in Medicine and more difficult in Surgery; probably it will be still more difficult in those more specialized branches of Medicine like Pediatrics, Diseases of Women, and Psychiatry, when the demand for men in these fields becomes equally large. Fortunately for us, through the foresight of the Permanent Officers of the School of Medicine, the way has been paved during the past years for the institution of University Medicine in four of these main sections: namely, Medicine, Surgery, Pediatrics, and Diseases of Women (Obstetrics and Gynecology); and now the Yale School of Medicine is more completely organized on the full-time or university basis, than any other School in the country. Indeed only a very minor portion of the budget of the Medical School is utilized for the part-time staff who assist in medical instruction, and the large majority of physicians affiliated with the School of Medicine, but also engaged in private practices, serve without salary.*

The institution of University Medicine (full-time) has been a gradual one, and although one department had accepted the principle from the standpoint of extramural practice and professional compensation years before the adoption of the system in any School, and another department had been organized with University Medicine (full-time) as its foundation stone, a third department still operated on the old part-time basis, and there were many difficulties that had to be overcome before the main clinical sections could be thoroughly established on this new plan. Among the most important of these was the reorganization of the administration of the Hospital.

REORGANIZATION OF THE ADMINISTRATION OF THE HOSPITAL

In 1826 a General Hospital Society was incorporated to raise funds for a hospital at New Haven. As an "auxiliary to the Medical Institution, this hospital was considered very important, as without an establishment of this kind, it is impossible to communicate medical instruction in the most advantageous manner." Hence, we find the professors in the medical school enthusiastically pledged their professional services to the Hospital generously, also, gave to it 10% of their incomes from the Medical Institution for five years, in case, in each instance, the sum did not exceed one hundred dollars a year, but provided it was less than this stated amount, then they promised to increase it to that figure. The State Medical Society was equally eager to aid in the erection of this hospital, and appropriated for this purpose the yearly amount payable for degrees and also voted that this hospital be so located as best to subserve the interest of the Medical School.*

---

* From the Report of the President, Yale University, 1921, pp. 199-201.

This bit of history is important, and the idea of developing a hospital for the more thorough teaching of medicine was fostered for many years by the General Hospital Society of Connecticut at the New Haven Hospital. But as so frequently occurs, from misinformation or lack of information, the bonds between Hospital and Medical School were not strengthened; indeed it may be said they became somewhat more loose. The plant itself was not kept up, and no doubt on account of the lack of development of the Medical School, as much as for any other reason, the Hospital-Medical School situation became serious. The first step in mending the affairs of these two institutions was taken in May, 1912, when the Hospital and the University entered upon a new agreement. Conditional on the erection and equipment of a modern clinical and pathological laboratory by the University on the Hospital grounds, and the securing by the University of a sum of $500,000 as maintenance for this laboratory, the Hospital agreed to place its property, buildings, and funds, worth more than three million dollars, at the disposal of the Medical School for teaching purposes.* The University was able to meet its conditions to fulfil the agreement by the generous gift of the Anthony N. Brady family.† On account of the war, however, the University was unable to meet the conditional gift of the General Education Board by January, 1916, and it was not until June, 1918, that an endowment of two million dollars was obtained for the Medical School by means of which the agreement between the General Education Board and Yale University could be consummated.‡ In accordance with this agreement Yale University placed its chief departments, including the clinical departments of Medicine, Surgery, and Obstetrics and Gynecology, on the so-called full-time basis. This could be accomplished only by an amendment to the contract between the General Hospital Society of Connecticut and Yale University, entered into, as before stated, in May, 1912, to the effect that the University staff, elected by the Hospital, should have the privileges of the Hospital throughout the year.§ In the meantime, the Hospital had taken the first steps in its internal reorganization. A survey had been made of the organization and physical facility of the institution in the spring of 1918 by Dr. Winford H. Smith, and upon his recommendation the active committee of the Board of Directors of the New Haven Hospital, heretofore known as the Prudential Committee, was enlarged from a membership of three to seven, and became known as the Executive Committee. This became an active body meeting at frequent and regular intervals throughout the year, and with the approval of the Board of Directors actually conducting the business of the Hospital. This Executive Committee differed from the old Prudential Committee inasmuch as there were no practicing physicians associated with it. Its function is to care for the non-medical policy of the institution, and a Medical Board was created to advise the Executive Committee in regard to professional policy. This Medical Board, it was stipulated, should be composed of the heads of the full-time Medical School sections, operating in the Hospital, including Pathology, Medicine, Surgery, Obstetrics and Gynecology, and such other full-time clinical sections as might be subsequently created. It was further stipulated that the Superintendent of the Hospital was to act as secretary of the Medical Board, and sit with the Executive Committee to convey directly to this body the recommendations of the Medical Board. After some delay, this organization has been completed, and has proved eminently satisfactory. For the first time in many years, the physicians working in the Hospital have been given a voice in the medical policies of the institution. The Executive Committee too has undergone some change, and now three of its members are also members of the Corporation of the University, the advantages of which are obvious. No better evidence of the increased efficiency of this organization could be given than a brief account of the changes in the resources of the Hospital that have occurred in the past two years.

---

* Steiner: Memorial of the Centennial of the Yale Medical School, pp. 26-27.

* For details of this agreement see Secretary's Report, Yale University, 1913, pp. 51-57.

† For details of this agreement see Secretary's Report, Yale University, 1914, pp. 61-65.

‡ For details of this agreement see Secretary's Report, Yale University, 1918, pp. 39-40.

§ For details of this modification of the agreement, see Secretary's Report, Yale University, 1918, pp. 37-38.

In the spring of 1919 the Hospital was without general funds, and was facing a large deficit. Reconstruction and new construction could not be considered under these conditions. A drive in the community of New Haven was made in the spring of 1919 and a sum of $230,000 was raised to cover the existing deficit and the deficit of the coming year. At the same time a bond issue of one million dollars was arranged for rehabilitation and new construction. Again in the spring of 1920, the Executive Committee succeeded in raising an annual contribution of about $100,000 a year for five years from a group of prominent and philanthropic citizens. In May, 1920, the General Education Board pledged one million dollars towards three million dollars to be secured by Yale University during the two succeeding years, for additional endowment for the School of Medicine. It was further provided that the General Education Board should pay to the University for the maintenance of the School of Medicine, interest at the rate of 5% per annum on this contingent appropriation of one million dollars, provided that during the period from July 1, 1920, to June 30, 1922, the contribution of the University for the support of the School of Medicine should not be diminished. The University has very generously contributed each year a sum equivalent to the interest on this one million dollars toward the maintenance of the New Haven Hospital, to offset the increased expenditures at the institution, entailed through the adoption of full-time clinical teaching. This help on the part of the citizens of New Haven and Yale University, assisted by the General Education Board, has enabled the Hospital to operate without a deficit during its last fiscal year, in spite of the fact that active measures in the rehabilitation of the plant have been begun.

THE NEW HAVEN DISPENSARY

The New Haven Dispensary was organized in 1872. The interest in the project was very great and the Dispensary thrived. The facilities were enlarged on several occasions, and were made available for students in the Yale University School of Medicine. This affiliation was greatly strengthened in 1901 through a gift to the University for the erection of a dispensary building by Mrs. Thomas G. Bennett, as a memorial to her mother, Jane Ellen Hope, wife of Oliver Fisher Winchester. This Dispensary, situated at the corner of Congress Avenue and Cedar Street, opposite the New Haven Hospital, is a three story brick building, modern in construction and equipment. Situated in the immediate vicinity of the New Haven Hospital, the institutions nevertheless have had no affiliation until very recently. The Dispensary has a Board of Managers and a Board of Attending Physicians, but in later years the meetings of this board have become perfunctory. The medical staff of the New Haven Dispensary was appointed by this Board of Managers from nominations made through Yale University, just as the Medical Staff of the New Haven Hospital was appointed by the Board of Directors of the Hospital, on nomination through the University. Even though the head of a section in the School of Medicine was also in charge of his specialty in the Hospital and in the Dispensary, the organization of the Hospital and Dispensary were entirely separate; and his appointment for the two clinical divisions of the School—Hospital and Dispensary—had to be acted upon by the several boards independently. This in itself was sufficiently complicated but the separation of the other activities in the Dispensary from those of the Hospital, such as nursing, social service, pharmacy, laboratory facilities, etc., greatly decreased the efficiency of these branches at the Dispensary. The greatest inefficiency of the institution, however, lay in the fact that it was only open for clinics during three hours in the afternoon, and the clientele was so large that the building was overcrowded and the medical care unsatisfactory.

A special effort was made during the summer of 1920 to create a closer affiliation between the Hospital and Dispensary, and thereby not only improve the medical service at the Dispensary, but operate the institution more efficiently and economically. The Medical Staff was united with that of the Hospital to form a combined Medical Staff of the New Haven Hospital and Dispensary. Throughout the year this body meets once each month to discuss medical problems associated with these institutions and to make recommendations directly to the Medical Board of the Hospital for transmission to the Board of Directors of the Hospital and Dispensary on the one hand and to the Board of Permanent Officers of the School of Medicine on the other (see chart of organization). The administration of the Dispensary was placed in the hands of the Hospital superintendent, and a special assistant superintendent was provided to act as superintendent of the Dispensary. Likewise nursing, pharmacy, and general maintenance of the Dispensary were united with those of the Hospital and each of these divisions was placed under the direction of a single head for both institutions. The hours of the Dispensary were changed so that it is open from eight in the morning until five in the evening every day except Sunday, and night clinics have been instituted in several departments. Through the University a sum of $5,000 was obtained for physical improvements at the Dispensary and through the first "Community Chest" a sum of nearly $15,000 was made available for the general maintenance and improvement in the service at the Dispensary for the year 1920-21. These changes were made with the advice of Mr. Michael M. Davis, Jr., considered to be one of the most prominent dispensary administrators in the United States, who was in New Haven in the fall of 1920 at the special request of the School of Medicine, to make a survey of the Dispensary. The result of these changes has been most gratifying. The efficiency of the medical service has been greatly improved despite the fact that the number of patients treated at the Dispensary increased materially last year over the previous year.

The trend of modern medicine is to utilize a dispensary for the complete study of ambulatory cases, even those who are subsequently admitted to a hospital for further care; and by thorough records, such as are now installed at the Dispensary and Hospital, and which are unit histories for both institutions, a great many hospital days are saved for patients, and a larger utility can be made of the available beds in the Hospital. It is needless to say that the closer affiliation of these institutions and the improvement in the medical personnel and professional care at the Dispensary has stimulated patients to return for further observation after discharge from the Hospital.

With the establishment of a university (full-time) Section of Pediatrics at the beginning of the present university year, the appointment system has been instituted in the Pediatric Clinic of the Dispensary. The advantages of this system, elaborated below, are so obvious that other clinics have decided to adopt it as soon as facilities can be made available. This, it is hoped, will be possible for all clinics when the Dispensary is located in the center of the Hospital group, as described under the plans for the rehabilitation and reconstruction at the Hospital (pp. 39-50).

THE APPOINTMENT SYSTEM

DR. E. A. PARK

I. Historical: The first dispensary organized on the basis of appointments for patients was the one conducted by the American Red Cross in Le Havre, France, for the benefit of the children of the Belgian refugees and later for the children of the French refugees and civil population. The plan worked with so much success at Le Havre that it seemed wise to inaugurate it in the organization of the Pediatric Section of the Yale Medical School.

II. The Pediatric division of the New Haven Dispensary occupies five rooms on the ground floor, four of which are examining rooms and in one the temperatures and the weights of the patients are determined. Another room in the back of the building, divided into three cubicles, is used for the isolation of children with contagious diseases. On the floor above is a room which serves as a laboratory and treatment room. In the main waiting room, benches have been placed for the accommodation of patients and desks have been provided at which doctors or students can record histories. The clerk who receives patients has a desk on the Pediatric side of the general waiting room. She makes appointments for new patients as well as for those returning for subsequent visits.

The staff at present consists of a dispensary head, ranking as instructor in the University, who has no other duties than the management of the children's division of the out-patient department, a first assistant, the four internes of the Pediatric service of the Hospital and three practicing physicians. These three physicians together serve in the Dispensary a total of not more than twenty hours per week. In addition to the staff enumerated there are ten students who obtain a part of their training in Pediatrics by work in the Dispensary, the dispensary clerk, already alluded to, and a nurse. Patients of special interest or importance in the Dispensary are seen by the professors of Pediatrics, at specified times.

The Pediatric division of the Dispensary is open for the admission of patients from 9 A.M. to 12 noon and from 2 P.M. to 4:30 P.M. The doors are closed at 5 P.M.

The Dispensary clerk functions similarly to the secretary for a group of private physicians. She maintains schedules for each doctor, arranges the appointments, etc.

The "full-time" staff of the Dispensary is distributed as follows: 9 A.M.–10 A.M.: Physician-in-charge; first assistant; one interne (this interne does the laboratory work for the Pediatric service of the Hospital and Dispensary and has no ward patients); and 10 students.

10 A.M.-12 noon: the above staff with addition of two more internes.

2 P.M.-5 P.M.: Physician-in-charge; first assistant (not the same one who serves in the morning); an interne who has no morning Dispensary duties; and 10 students (same group as serve in the morning). Other internes are on first and second calls.

The patients seen on any given day may be divided into two groups, *i.e.,* those who come by appointment (Group A) and those who have no appointments and may be termed "stragglers" (Group B).

The patients in Group A are (1) patients who have recently been to the Dispensary and who return at a stated hour on a stated day to see the physicians whom they saw on previous visits. (2) New patients who have received appointments by personal application or by telephone or for whom appointments have been made by social workers, public health nurses, matrons of nurseries, boarding homes, or orphanages, or other workers for health, charitable, and social agencies. Three appointments per hour per doctor are made —on the hour, twenty minutes past the hour, and forty minutes past the hour; twenty minutes are thus allotted to each patient. The appointments are made by the clerk for the physician who simply indicates, in the case of old patients, the day when he wishes to make the next examination. In making appointments the convenience of the mother is respected just as far as possible. By preference the clerk makes appointments early in the morning or afternoon so that the later hours may be free for examination of the so-called "stragglers" who constitute Group B.

The patients in Group B consist of (1) new patients; (2) old patients of recent date who failed to keep previous appointments; and (3) old patients who had been discharged or who had not been coming to the Dispensary recently.

The patients who have appointments are seen promptly; otherwise the aim for which the plan was conceived would be defeated; the stragglers are seen when and by whom they may be. These patients are assigned to physicians whose time is free either because of a broken appointment or no appointment just at that period. In as far as possible the interne on laboratory service sees most or all of his appointment cases between 9 A.M. and 11 A.M. so that he may have the 11 A.M. to 12 noon hour free to devote to "stragglers." If the condition of these patients is not acute and there are many applicants, they may be given appointments for the next day; if a laboratory procedure seems indicated, that may be carried out or started so that on the return visit as much data as possible may be assembled.

The "straggler" group will always exist but will doubtless become relatively smaller as the Dispensary clientele becomes acquainted with the appointment system.

Although the new system has been in operation only since November 1, 1921, about 90% of the patients are seen by appointment and about 80% of appointments made are kept.

It is obvious from the distribution of the staff that the greatest volume of the work is planned for the morning. This is done so that the afternoon may be used for consultations and for more intensive work on selected cases and groups of cases. A syphilis clinic is conducted during one afternoon and a cardiac clinic and protein sensitization clinic are planned. A health conference for babies and another for older children are conducted at the Dispensary by the Visiting Nurse Association of New Haven, the physicians in charge being members of the Pediatric staff.

III. The advantages from the patients' standpoint of the appointment system. The advantages of the appointment system are so obvious as to require little comment. Perhaps the most important result is the saving of the parent's time and, therefore, of his money. The day's wage is of as much importance to the dispensary patient as the day's income to the dispensary doctor; its steady flow is often a matter of vital importance. Yet the dispensary system generally in use, according to which the patients are obliged to assemble before 9 A.M. or 2 P.M., and then to wait often the whole morning or afternoon, implies that the time of the dispensary patient is of so little value that it may almost be disregarded. The truth is that the modern dispensary is conducted, primarily, with a view to the convenience of the dispensary physician, on the principle that it is better for forty patients seated on the benches to lose sixty hours' time, than for the doctors to be subjected to the possibility of losing one-half hour's time. As everyone who has worked in a children's dispensary knows, many a parent who finds himself obliged to sacrifice his day's wage, or, if he works at night, his day's sleep, will not bring his child to the dispensary. Yet such a parent will bring his child to meet the doctor on a day and hour found to be mutually convenient.

If the dispensary patient paid a fee to the dispensary doctor, as the private patient pays a fee to his physician, in other words, if the dispensary doctor had been compelled by his own selfish interest to recognize the convenience and economic necessities of his patients, all dispensaries would have been operated on the appointment plan long ago. There is no reason why a dispensary created for the benefit of the poor should not be conducted from every point of view to their advantage.

IV. The advantages of the appointment system from the dispensary physician's and students' standpoint. From the physician's standpoint this system not only causes no loss of time, but it brings about the very best utilization of time by producing a more even distribution of patients throughout the dispensary day and week. The avalanche of patients which descends on Mondays, on the days following holidays, or the first pleasant day after a period of bad weather, can, to a great extent, be anticipated, or held and distributed. The doctor thus avoids the frequent necessity of abandoning all careful consideration of his cases in an effort to get rid of them as rapidly as possible. Furthermore, the assembling of crowds of children is obviated, exposure to contagious diseases minimized, and noise and confusion, the two attributes of a children's dispensary, greatly reduced.

From the students' standpoint and from the teacher's standpoint this system also offers advantages. Cases can be grouped by making their appointments fall together or in sequence on given days. Through the more even distribution of patients the students can be kept steadily occupied and their work can be better supervised. The student's interest in the patient can be aroused by making him feel that the case is his. The student expects to be a practitioner of medicine. Under the appointment arrangement he is able to imagine himself to be one.

V. The great reason for the adoption of the appointment system is that it enables the dispensary to discharge its obligations toward the community. The great reason for the adoption of the appointment system in dispensaries is, however, not because of advantages which it offers the student or teacher but because it is the only efficient and enlightened way in which a dispensary can be made to discharge its function toward the community. The appointment system makes the dispensary available to all members of the community and brings it to pass that the dispensary reaches a new class of patients, those in moderate circumstances who are unable to afford the services of specialists. It gives not only to the poor but also to the middle classes all the advantages of "group medicine." The extension of the use of the dispensary to people of moderate means is destined to supply a great need, since that class cannot at present afford to consult specialists on the one hand and on the other cannot or are too proud to go to dispensaries as at present conducted.

Furthermore, the establishment of the appointment system in the dispensary makes possible the development of a dispensary consultation practice. The practicing physician, finding that he can have his patient seen by appointment at the dispensary by a specialist, will use the dispensary as a place where valuable opinions and advice can be obtained. As the staff of the Dispensary of the Yale Medical School are essentially "full-time" and do not compete with the local physician, new relations of a friendly nature and mutual benefit are bound to form between the dispensary staff and the practicing physician. The practicing physician obtains valuable advice concerning his patient. The dispensary physician is rewarded by a new and perhaps interesting case.

It is claimed by the opponents of "full-time" medicine that the system does not offer sufficient clinical opportunity to give the staff an adequate clinical education. The appointment system in the dispensary makes most careful work possible. The combination of hospital training and dispensary training, the former in the kind of illness which confines the patient to bed, the latter in the milder forms of disease which the "full-time" physician is commonly supposed not to see, gives the members of the staff unequalled opportunities for a progressive development in clinical medicine. The present Pediatric staff regard their Dispensary work as equal in value to their Hospital work.

The dispensary which operates on an appointment basis is able to coöperate with maximal efficiency with the various charitable institutions. District nurses and social workers from the charitable institutions cannot bring patients to dispensaries if their time is wasted by prolonged waiting on the dispensary benches. The dispensary receiving patients by appointments is bound to have the closest relations with the charitable institutions of the city and to be a great asset as a medical clearing house.

The methods by which dispensaries are conducted at present are medieval and barbaric and probably are not different now than they were hundreds of years ago. When dispensaries manned by "full-time" staffs receive patients by appointment the dispensary will have suddenly undergone an evolution into an institution which will be of the greatest usefulness to the community. At the same time a substantial step will have been made toward the socialization of medicine.

VI. The substitution of the name "The Clinic for Ambulatory Patients" (or some such name) for the name, dispensary. The name dispensary carries a stigma. When a dispensary is put on an appointment plan, its whole character is changed and its name should be changed to correspond to its new functions. The above name is suggested.

VII. The advantages of having a clinic for ambulatory patients managed in the hospital. Every hospital should be built around its dispensary, just as the rooms in a hotel should be built around (be immediately accessible from) the office. All guests enter and leave the hotel by way of the office. All patients, whether rich or poor, should enter the hospital and leave the hospital by way of the clinic. If a hospital is to discharge its obligations to the community fully and to operate in the most efficient manner, one class of patients cannot come in and go out the front way and another the back way. All patients must come in through a common channel to a common distributing center. The administrative part of the hospital must also be centrally located and lie in immediate proximity to the distributing center just alluded to.

There may be a stigma in the minds of the laity to entering the hospital wards, but there is certainly no stigma attached to entering a hospital. The clinic for the ambulatory sick ought to be so arranged and conducted that there is no stigma attached to going to it for diagnosis or treatment. All classes of patients should go as a matter of course and in the same spirit to the clinic of a hospital. The clinic should be arranged so that unpleasant contacts can be avoided. Waiting rooms can be provided which will permit privacy or segregation of certain groups of patients from the rest. The rooms must all be in the clinic, however. The entrance to the hospital of all patients through a common building will be greatly facilitated by the appointment scheme.

The reason that it is necessary to have all patients admitted to the hospital through a common building is because of the advantages both from the hospital's and patients' standpoint of centralization and the "triage" system. In the clinic, preferably in that part of it nearest the main route to the hospital wards, there should be series of rooms and laboratories which will permit complete history taking, complete physical examination, ordinary laboratory examinations, etc., to be performed on the patient en route to the hospital wards. Very sick patients must be transferred to the wards immediately and the examinations done and records obtained there. But the great majority of patients need not be sent to the wards in haste. Whenever it is possible, the patient should arrive in the ward already studied, the diagnosis made and treatment determined. This is permitted by the "triage" scheme. Accordingly adequate clinical laboratories, the X-ray rooms, and the heart station for the hospital at large, all should be located in the clinic at points convenient to the patient in his progress from the clinic to the hospital private rooms or wards.

The advantages of the scheme outlined have been in part alluded to. Some advantages have not been mentioned. The clinic must be centrally located not only from the standpoint of the patients but also of the staff. The "full-time" staff in performing their dual duties will be continually passing between wards and clinic. The distances must be reduced as much as possible. The same argument holds for the nursing staff and for the orderlies and those who transport patients to and from the wards. By having all admissions pass through the clinic, all duplication of personnel, service, apparatus, laboratories, etc., is made unnecessary. By having the "triage" system in connection with the clinic, the clinical material in the hospital can be turned over with increased rapidity. Many patients will be saved days of hospital stay by having examinations of various kinds done in the process of admission instead of at the leisure of the staff after admission to the wards. The whole arrangement makes for increased efficiency and economy of money as well as effort. Moreover, it enables the hospital to reach a new set of patients and to play a more valuable part in its relation to the community.

In so far as the Yale School of Medicine is concerned, the construction of a central clinic building containing a "triage" system and adequate laboratory and other facilities, and the establishment in it of a clinic conducted by a "full-time" staff on the appointment basis, would constitute a new departure in medical organization which is bound to succeed and bound to command wide attention. It would be a new development of far-reaching consequence for the conception and development of which "full-time" medicine would have been in large part responsible.

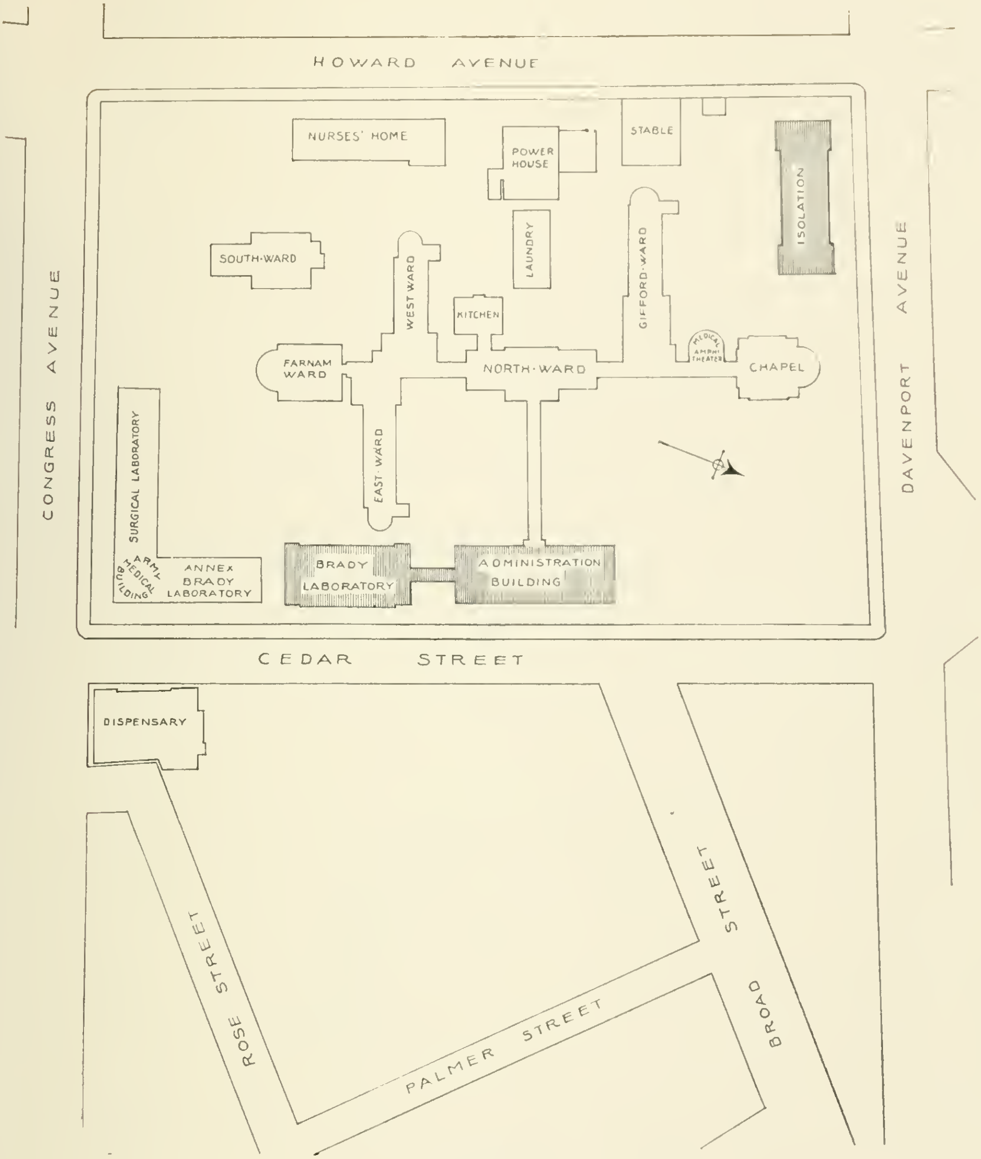


DIAGRAM I

REHABILITATION AND RECONSTRUCTION AT THE HOSPITAL WITH INCREASED BUDGET

It has been aptly said that: "As long as men will study the stars with scientific methods, as long as men will study the stones with scientific methods, men will be found to study disease. The men are ready and waiting; the opportunity only is needed."*

---

* From Cole, *Science,* 1920, LI, 329.

The number of men who will be attracted to University Medicine (full-time) will depend entirely on the inducement which this field offers. Few will be willing to give up the financial rewards of practice unless resources are available to create University Medicine (full-time) in fact as well as in name. Cole has defined University Medicine as "a department designed for the purpose of studying and investigating disease, of accumulating and distributing the existing knowledge

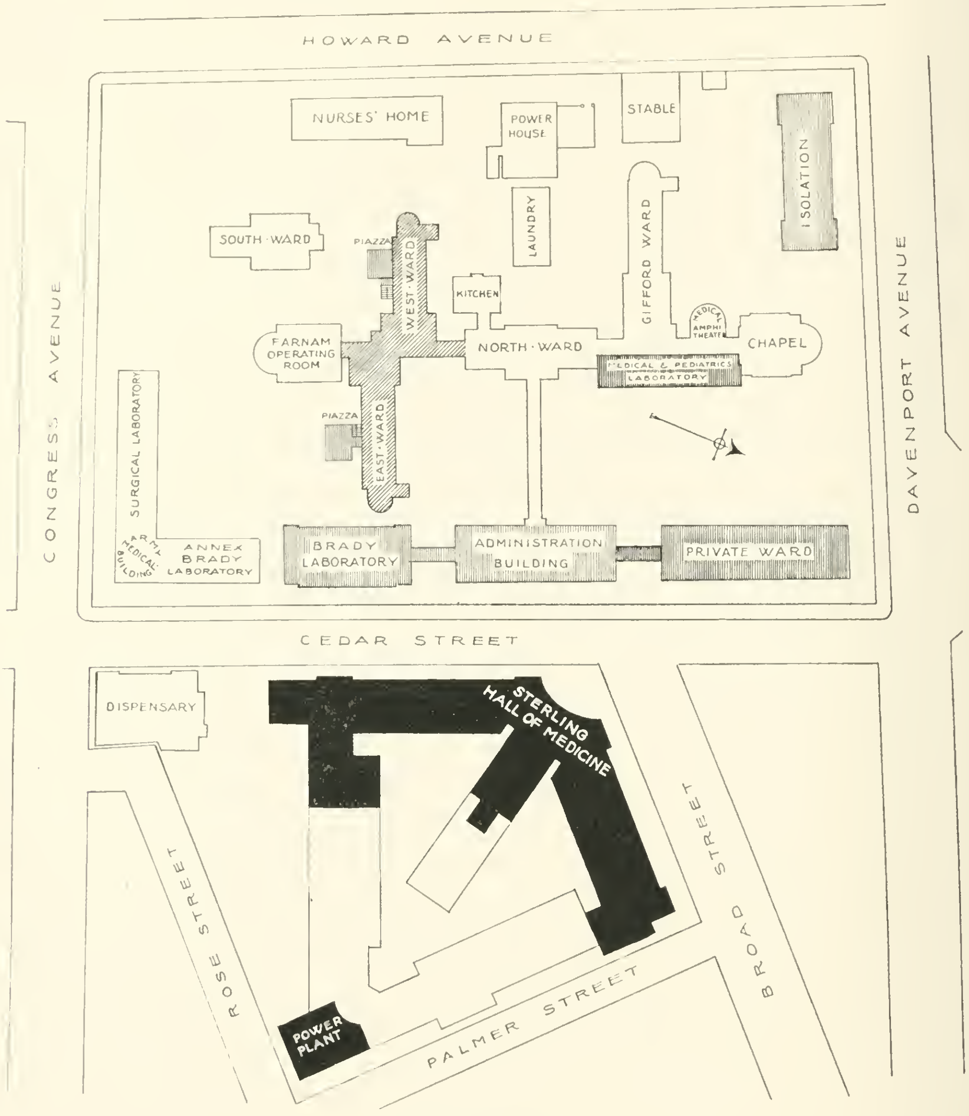


DIAGRAM II

concerning disease, and to contribute to the extension of this knowledge." Not only are men and laboratories needed, but the physical facilities must be geographically situated to be of maximal usefulness. With the public wards and laboratories separated, with offices, dispensary, and private wards occupying different portions of the hospital premises, the energy of the staff is disseminated and the efficiency of service and investigation suffers. How far the clinical sections of the Yale University School of Medicine have been handicapped by lack of physical facilities, and how far this has been remedied and will be remedied as the plans for the rehabilitation of the Hospital are completed, can best be judged by recounting these plans.

Diagram I shows the existing completed structures of the Hospital. The North Ward was the first of the group of the New Haven Hospital buildings. It will be one hundred years old in 1931. It is an old ramshackle structure, and although somewhat improved by paint and decoration within the last two years, it is entirely unsatisfactory from every standpoint. At present it houses about fourteen private rooms, an eye ward, and also acts as a service building. The levels of its corridors are different from those adjoining, and the widths of these corridors are very narrow. Adjoining this North Ward, a more modern but inefficient kitchen and diningroom have been installed. The East and West Wards constructed in 1872 were typical of the time; large, unsanitary, unhygienic halls, poorly adapted to the medicine of to-day. Gifford Ward, somewhat more recent (1892), is of the same general type. At the west end of the East and West corridor, there is a Chapel, which has been used as an overflow or emergency ward, and also for class and demonstration purposes. It has been needed badly since the only other teaching room is a very small amphitheatre between the Gifford Ward and the Chapel. At the east end of the corridor is an operating suite (1888). Remodeled (1913), well arranged, and well equipped, this ward has the disadvantage of being on a lower level than the main corridor. It lacks waiting rooms and blocks the east end of the corridor. The South Ward, built in 1899, is also typical of its day. Like the Gifford Ward, and East and West Wards, it lacks modern conveniences for the care of patients and connects with the main building only by a low-studded tunnel. The Nurses' Home has long since become inadequate, and auxiliary dormitories have been provided by remodeling dwelling houses in the neighborhood. There are three modern buildings on the grounds. One of these, the Brady Laboratory, has been discussed above. The Boardman Administration Building was built at the same time as the Brady Laboratory and became available in January, 1918. This is utilized as follows:

(1) Basement: the electrocardiographic station and the radiographic department.

(2) First floor: offices of the superintendent and his staff, information offices, accounting department of the Hospital, social service department of the Hospital and Dispensary and the record room of the Hospital.

(3) The second and third floors are dormitories for resident physicians, accommodating approximately thirty.

The third building is the Isolation Pavilion, built in 1913. It is a well-designed structure and adapted for the proper care of infectious diseases. Besides the buildings above described, there is a power house, laundry, stable or garage on the Howard Avenue side of the lot, and the Barrack known as the Annex of the Brady Laboratory, built during the war for the Yale Army Laboratory School at University expense, and subsequently remodeled to furnish a classroom in the Cedar Street wing, also laboratories for Surgery in the Congress Avenue wing. The structure is made of inflammable ma-

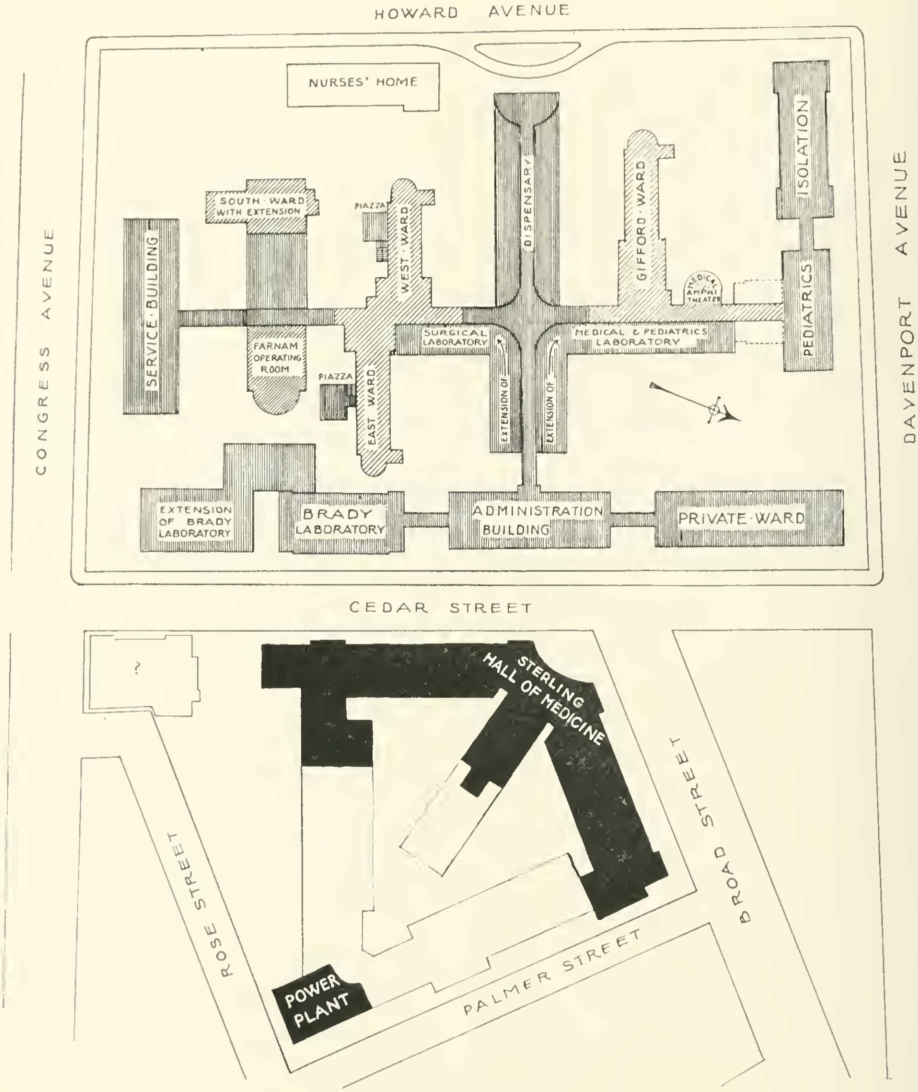
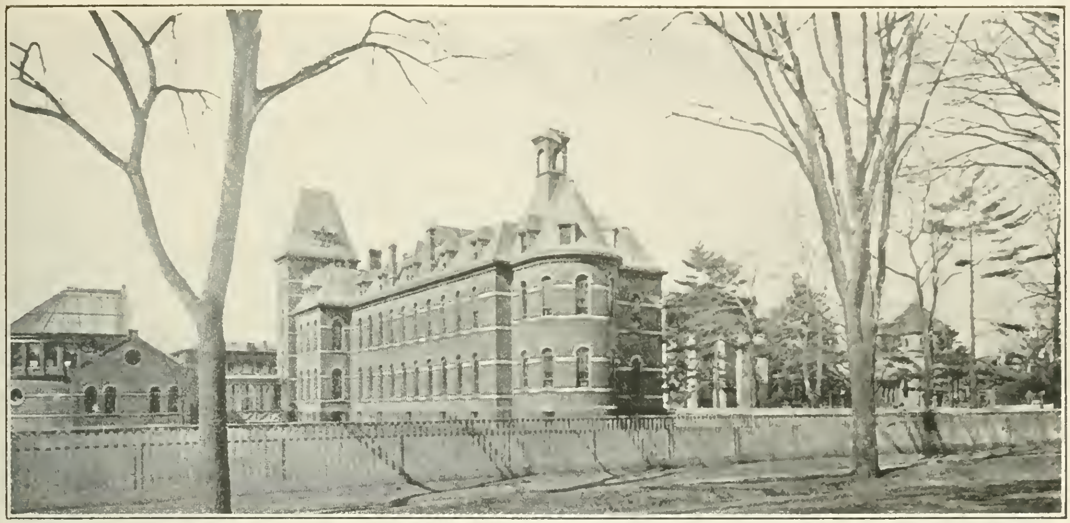
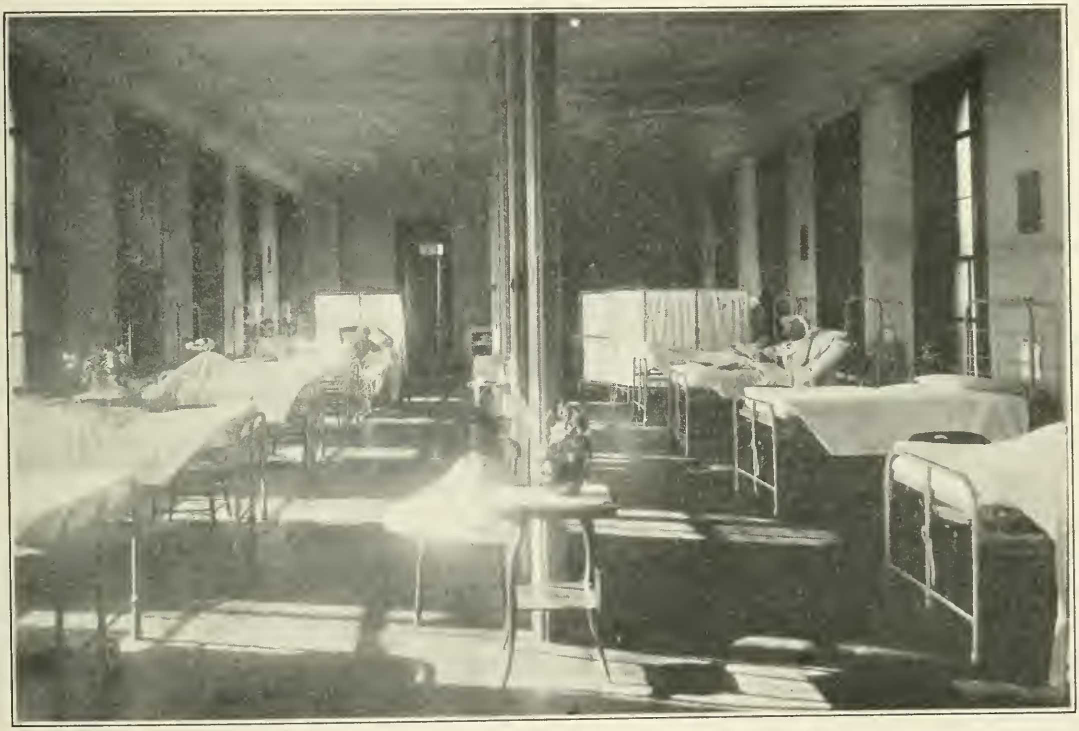


DIAGRAM III



FAÇADE OF EAST WARDS PRIOR TO REHABILITATION
WITH FARNAM OPERATING SUITE TO THE LEFT



INTERIOR OF EAST WARDS PRIOR TO REHABILITATION terial and on account of the nature of the work conducted in it and the large number of people frequently gathered there for conference and lecture, it should be replaced as soon as possible. The power house is running at full capacity at present.

This was the status at the beginning of the summer of 1921, summarized briefly as follows:

(1) An Administration Building for the business of the hospital also furnishes dormitory space for approximately thirty physicians.

(2) A modern laboratory for Pathology and Bacteriology, in which Medicine, Obstetrics and Gynecology, Experimental Medicine (later Pharmacology and Toxicology), Pediatrics, the administrative offices of the School, and a Library are crowded.

(3) A second laboratory, ample in space, for Surgery and for a classroom, but a fire menace.

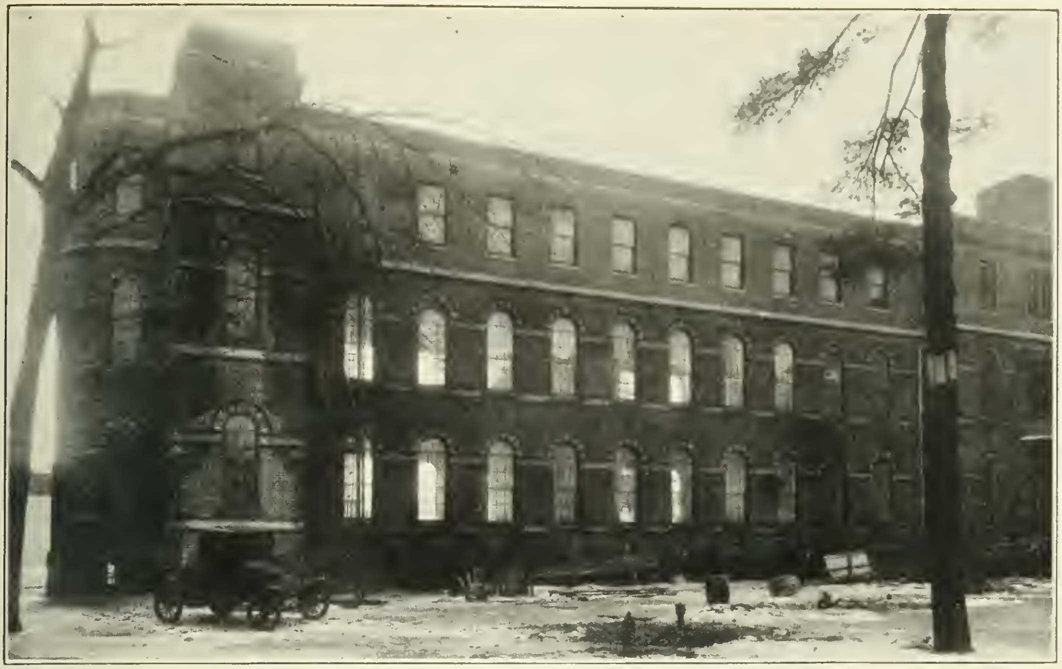
(4) Ward facilities for:

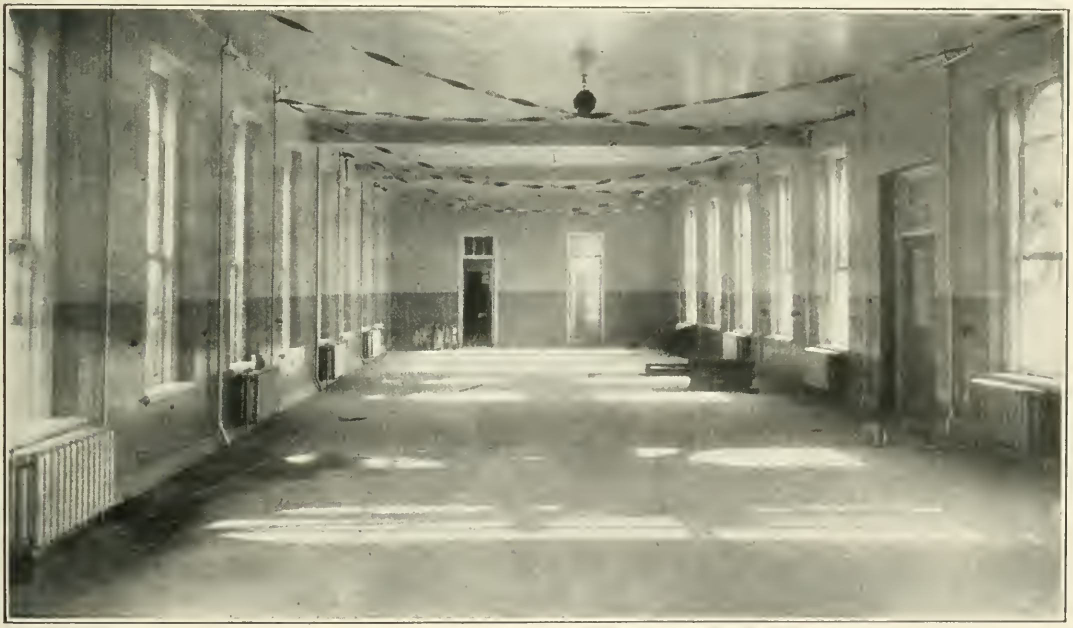
(a) Medicine:
  Gifford I; male; non-infectious cases; 20 beds.
  Gifford II; female; non-infectious cases; 20 beds.
  Isolation; male and female; infectious diseases; 35 beds.
    (Total 75 beds for medical cases.)
(b) Surgery:
  East I; male; 22 beds.
  East II; female; 22 beds.
  West I; male; 18 beds.
  West II; children; 9 beds.
    (Total 71 beds for surgical cases.)
(c) Pediatrics:
  West II; non-infectious cases; 12 beds.
  Isolation; infectious cases; 35 beds.
    (Total 47 beds for children.)
(d) Obstetrics and Gynecology:
  South; 20 beds for obstetrical cases.
  South; 12 beds for gynecological cases.
    (Total 32 beds for Obstetrical cases and Diseases of Women.)
(e) Private cases:
  North; 14 rooms.
  South; 4 rooms.
    (Total 18 private rooms.)

The inefficiency of this arrangement can be illustrated with the Section on Medicine as an example. Their laboratories occupy the third floor of the Brady Laboratory. Offices are provided in the Administration Building. Private cases are housed on the second and third floors of North Ward. Non-infectious medical cases are in Gifford Wards. Infectious cases are in the Isolation Pavilion. The Dispensary is on the opposite lot.

During the summer the rehabilitation of the East and West Wards was begun. Indeed these have been entirely wrecked and only the outer shell of the building left. The mansard roof was removed, the walls were continued to make a complete third story, reinforced concrete floors replaced the old wooden ones, modern sanitary equipment was installed, and large piazzas placed on the south side; in fact these wards have been restored to meet the most modern ideas in hospital construction. The old elevator at the east end of the building has been replaced by a modern one, and a new elevator has been installed in an unused shaft, at the west end of the building, near the Gifford Ward.

During the summer a second important building was begun; namely a laboratory, including a basement and two floors, 125 feet long and 30 feet wide, on the north wall of the main corridor, between the





EAST WARDS, EXTERIOR AND INTERIOR VIEWS, AFTER REHABILITATION old North Ward and the Chapel, as indicated in Diagram II. Plans have been completed and contracts let for a private pavilion (see chart). Construction on this pavilion is now under way.

This reconstruction will increase the capacity of the Hospital materially. The East and West Wards, of which only the first and second floors had been available for patients, provided approximately 80 beds. Reconstructed, they will provide facilities for 120 beds; an increase of 40. The private pavilion will have 55 individual rooms in place of the 18 rooms now located in the North and South Wards. There will be a redistribution of the beds among the services as follows:

(a) Medicine:
- Gifford I; male; non-infectious cases; 20 beds.
- Gifford II; female; non-infectious cases; 20 beds.
- Isolation; male and female; infectious cases; 35 beds.
- (Total 75 beds for medical cases.)

(b) Surgery:
- East I; male; 22 beds.
- East II; female; 22 beds.
- West I; male; 18 beds.
- West II; children; 10 beds.
- (Total 72 beds for surgical cases.)

(c) Pediatrics:
- East III; non-infectious cases; 24 beds.
- West III; non-infectious cases; 12 beds.
- Isolation; infectious cases; 35 beds.
- (Total 71 beds for children.)

(d) Obstetrics and Gynecology:
- West II; gynecological cases; 18 beds.
- South; obstetrical cases; 36 beds.
- (Total 54 beds for obstetrical and gynecological cases.)

(e) New Private Pavilion. 55 rooms.

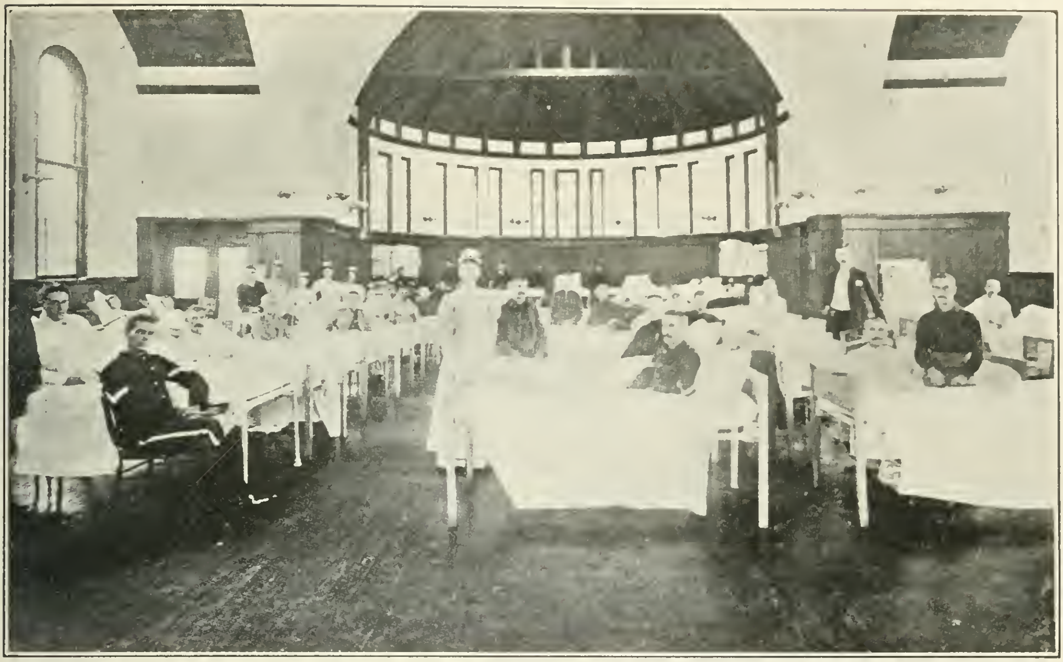
(f) North Ward; eye ward.
- Use of present private rooms undetermined.

The new laboratory on the north wall of the main corridor will be divided between the Sections on Medicine and Pediatrics, and the building will also provide offices for the University Staff of the Sections on Medicine and Pediatrics. Further changes contemplated and strongly urged by the Medical Board include:

(a) A modern service building on the Congress Avenue side of the lot. This building will contain storerooms, kitchen, dining-rooms and dormitories for the help; perhaps a laundry could be advantageously included in this structure. Its contemplated position is a departure from the usual central position of a service building, but the advantages of a central position for the ambulatory clinic are so obvious that the central plot has been reserved for such a clinic. In order to build a service building properly connected with the main corridor of the Hospital, it will be necessary to turn the operating suite on its axle, and extend the corridor to meet the service building. When the private ward and the service building have been completed, and there is no obstacle to the construction of these buildings on the selected plots, there will no longer be need for the old North Ward, and in this position it is proposed to build

(b) A modern Dispensary with an entrance from Howard Avenue for patients, reserving the entrance to the Administration Building on Cedar Street for physicians. The erection of a service building will also necessitate the destruction of the greater portion of the Congress Avenue wing of the Brady Laboratory Annex, and it is proposed to erect

(c) A laboratory (as indicated on Diagram



INTERIOR OF CHAPEL DURING THE WAR

III), opposite the West Ward, for the Surgical Sections of the Hospital, comparable to the laboratory opposite Gifford Ward, already erected for the Sections on Medicine and Pediatrics.

(d) The old South Ward should be remodeled and extended to meet the main corridor at a point opposite the operating suite.

(e) A modern Pediatric clinic is planned at the west end of the main corridor.

(f) The Gifford Wards should be rehabilitated just as the East and West are being changed now.

In order that these improvements can be accomplished, it is necessary to move the power house. With this in view the power plant, for the new Sterling Hall of Medicine, is designed on a unit system, so that it can be expanded to provide light and heat for both the Hospital and the Medical School. When these changes have been completed, the distribution of beds in the Hospital will be:

(a) Medicine:
  Gifford I; non-infectious cases; 25 beds.
  Gifford II; non-infectious cases; 25 beds.
  Gifford III; non-infectious cases; 25 beds.
  Isolation; infectious cases; 35 beds.

(A total of 110 beds for the Section on Medicine, to include not only infectious and non-infectious diseases, but also a number of beds for dermatology and neurology, the specialties of Medicine.)

(b) Surgery:
  East I; 22 beds.
  East II; 22 beds.
  East III; 22 beds.
  West I; 18 beds.

ISOLATION BUILDING

West II; 18 beds.
West III; 18 beds.

(A total of 120 beds for the Section on Surgery to include general, orthopedic, genito-urinary, neurological, ophthalmological, and oto-rhino-laryngological Surgery.)

(c) Pediatrics:

A new pavilion of 75 beds for non-infectious cases.

Isolation pavilion of 35 beds for infectious cases.

(A total of 110 beds for children's diseases.)

(d) Obstetrics and Gynecology:

South Ward; 36 beds.
South extension; 40 beds.

(A total number of 76 beds for Diseases of Women.)

(e) Private pavilion with a capacity of 55 beds.

Beside these facilities, the William Wirt Winchester Hospital, located about two miles from the New Haven Hospital and the School of Medicine, has a capacity for 100 cases of tuberculosis. This is a very modern and splendid Hospital belonging to the General Hospital Society of Connecticut, and indeed is a part of the New Haven Hospital plant. At present it is rented to the United States Public Health Service, taken over by them from the Army, to whom it was leased for war emergency purposes at its completion in 1918. Plans are also under way for a Psychiatry Pavilion, but these are at present too indefinite for a more detailed discussion.

BOARDMAN ADMINISTRATION BUILDING

It is believed that the present plant of the New Haven Hospital lends itself peculiarly to development. When the rehabilitation above outlined is completed, with the construction of a central Dispensary, equi-distant from Medicine and Pediatrics on the west, Surgery and Obstetrics and Gynecology on the east, near the offices and laboratories of these four clinical Sections of the School and Hospital, and near the present radiographic suite, the efficiency of the clinical staff will be greatly enhanced.

It is further believed that more detailed study of ambulatory cases will reduce the number of hospital days for the patient. After discharge from the Hospital, perhaps to a convalescent home, which it is hoped may be established on the grounds of the William Wirt Winchester Hospital, the patient will be more likely to return for observation to the Dispensary, if the same physicians who followed his illness in the Hospital, and even before admission to the Hospital, in the Dispensary, will again be available. A single record room for the Hospital and Dispensary, a single social service suite for Hospital and Dispensary, and classrooms for instruction will be provided in this building. Medicine and Pediatrics will have their Dispensary and their wards, offices, laboratories, and classrooms on the west side of the lot near the isolation pavilion. Surgery and Obstetrics and Gynecology will share the Dispensary, and have their offices, laboratories, wards, and operating suites together at the east side of the lot.

From a medical standpoint this arrangement is almost ideal.

The projected development at the New Haven Hospital and Dispensary has been inserted to indicate the facilities which it is hoped will be provided for the clinical Sections of the Department of Clinical Medicine. This, as has been previously said, includes:

(1) Internal Medicine.
(2) Surgery.
(3) Obstetrics and Gynecology.
(4) Pediatrics.

They will be discussed in order, and after much the same fashion as was used in presenting the pre-clinical sections of the School.

INTERNAL MEDICINE

Professor Francis Gilman Blake, Chairman.

Associate Professor John Punnett Peters, Jr.

Assistant Professor William Christopher Stadie.

Arthur Bliss Dayton, Instructor.

Harold Myer Marvin, Instructor.

James Dowling Trask, Jr., Instructor.

Charles Thomas Nellans, Instructor.

James Charles Fox, Jr., Assistant.

Clinical Professor George Blumer.

Clinical Professor Wilder Tileston.

Clinical Professor Oliver Thomas Osborne.

Clinical Professor John Edward Lane.

Clinical Professor Alfred Goldstein Nadler.

Assistant Clinical Professor Frank Billings Standish.

Assistant Clinical Professor Louis Michael Gompertz.

William McDonald, Jr., Clinical Instructor.

William Barclay Terhune, 3d, Clinical Instructor.

Edgar Mayer Johnson, Clinical Assistant.

Harry Hilts Maynard, Clinical Assistant.

Howard Spencer Colwell, Clinical Assistant.

Orville Forrest Rogers, Jr., Clinical Assistant.

Sidney Winters, Clinical Assistant.

Hugh Francis Keating, Clinical Assistant.

Arthur Weil, Clinical Assistant.

Arthur Romanzo Weed, Clinical Assistant.

Allen Ross Diefendorf, Lecturer on Psychiatry.

Marvin McRae Scarbrough, Lecturer on Medical Jurisprudence.

Judge James Henry Webb, Lecturer on Medical Jurisprudence.

The Section on Internal Medicine was theoretically reorganized on a University basis in September, 1919. The budget and laboratory facilities were absolutely inadequate, and the Professor of Medicine (also Dean of the School) was the only full-time representative, aside from the resident, assistant residents, and internes. The Section on Pathology and Bacteriology conducted the clinical-biological routine for the Hospital, and the Department of Experimental Medicine undertook the routine chemical investigations, as well as chemical-clinical experimental studies. A group of clinicians from the community assisted in the conduct of the teaching and ward classes. Considering the inadequacy of budget and facilities, the Section on Internal Medicine was remarkably efficient, and with increased opportunity would have developed greatly. Unfortunately for the School, the head of this Section resigned from his double position of Professor of Medicine and Dean of the School on July 1, 1920, and although efforts had been made to secure a successor as Professor of Medicine, this was impossible until the spring of 1921. The Section, therefore, was actually without a head during the academic year of 1920-21. A system of visiting clinicians was introduced for that year, and each week a prominent internist visited the School and Hospital, on invitation from the Faculty, and conducted ward classes and clinics. While there are of course great disadvantages to this type of organization, the benefits derived from visiting professors in clinical and probably also in pre-clinical sections of the School are obvious enough to recommend the plan for greater use in less intense form, perhaps, than was adopted here.

Many lessons were learned during the period of one year, before the School succeeded in finding an incumbent for the Chair of Medicine. As has been indicated above, it became necessary to reorganize the pre-clinical sections and to abolish the Department of Experimental Medicine. Adequate laboratory facilities in the vicinity of the wards also had to be provided, and it was essential to materially increase the budget. When these needs were met, it was possible for the chosen Professor of Medicine to organize a full-time Section on Medicine in fact as well as in theory. The Medical Clinic now has two main divisions, biological and chemical, as well as a subdivision of clinical pathology and electrocardiography, a competent staff for the care of the sick, for the instruction of students, and for the investigation of medical problems in the Hospital and Dispensary.

At present the Section on Medicine is responsible for certain specialties, including Dermatology and Syphilis, Neurology, Psychiatry and Therapeutics. These subjects are assigned to clinical teachers of the rank of instructor, assistant professor, or professor, who are directly responsible to the Professor of Medicine for the conduct of instruction. They are also available for consultation in Hospital and Dispensary. In return, the advantages of the clinics and its laboratories are available at the discretion of the Professor of Medicine. Psychiatry is the only one of these subsections mentioned which it is now planned to elevate to a plane coördinate with the Sections on Medicine, Surgery, Diseases of Women, and Pediatrics. Neurology, Dermatology, Syphilis, and Tuberculosis will for the present remain subsidiary to Clinical Medicine and will develop either through the interest and ability of clinical instructors, assisted by the Section on Medicine, or by junior members of the full-time staff of the Section on Medicine who may be imported on account of their interest in one of these specialties after a thorough grounding in Internal Medicine or who may be given the opportunity here to specialize in one of these fields. There is no reason why these subsections may not develop and be supported as much or even more than any other division of the Section on Medicine, should the proper incumbent be found and should his scientific product deserve such recognition, whether in academic standing or in financial support. The policy of the Section on Medicine, however, will be to allocate academic positions and budgets each year or group of years on merit, and should a thriving subsection lose its leader, its budget will be absorbed by the main section and redistributed to those sections where it is most needed.

The courses of study offered by the Section on Internal Medicine are as follows:

The courses in Medicine begin with the second term of the second year and continue throughout the third and fourth years. The instruction in the second year has in view the acquisition by the student of the technique of physical examination and the simpler laboratory procedures employed in the study of disease. During the fourth year, students are assigned to clinical work in the hospital where they are provided an opportunity to acquire experience in history-taking and physical diagnosis. During the fourth year, students assist in the Dispensary. Throughout the course in Medicine, the student attends clinics and lectures designed to present a systematic survey of the principles underlying the symptomatology, diagnosis, and treatment of disease.

Medicine 1: General Principles of Medicine.

Medicine 2: Physical Diagnosis.

Medicine 3: Clinical Microscopy.

Medicine 4: The Principles and Practice of Medicine.

Medicine 5: Dispensary Section Work.

Medicine 6: Dispensary Clinic.

Medicine 7: Dispensary Clinic; Gastroenterology.

Medicine 8: Dispensary Clinic; Tuberculosis.

Medicine 9: Hospital Ward Work.

Medicine 10: Hospital Clinic.

SURGERY

Associate Professor SAMUEL CLARK HARVEY.

Assistant Professor ROBERT JAY COOK; Orthopedics.

Assistant Professor CLYDE LEROY DEMING; Genito-Urinary Surgery.

Assistant Professor JOHN JAMIESON MORTON, JR.

WILLIAM CORE DUFFY, Instructor.

BEVERLY DOUGLAS, Instructor.

THEODORE SIDNEY MOÏSE, Instructor.

CLIFTON RUSSELL SCOTT, Instructor; Radiology.

MAXWELL LEAR, Assistant.

EARL STEPHEN MERRILL, Assistant.

Clinical Professor WILLIS ELLIS HARTSHORN.

Clinical Professor WILLIAM FRANCIS VERDI.

Clinical Professor ARTHUR NATHANIEL ALLING; Ophthalmology.

Clinical Professor HENRY LAWRENCE SWAIN; Oto-rhino-laryngology.

Clinical Professor FREDERICK NOYES SPERRY; Oto-rhino-laryngology.

Clinical Professor FRANK LYMAN PHILLIPS; Oto-rhino-laryngology.

Assistant Clinical Professor EUGENE MAURICE BLAKE; Ophthalmology.

ELWYN RICHARD BRYANT, Clinical Instructor.

ISAO HIRATA, Clinical Instructor.

JEREMIAH BARRETT SULLIVAN, Clinical Instructor.

THOMAS HERBERT YOUNG, Clinical Instructor.

ARTHUR MEYER YUDKIN, Clinical Assistant.

ROBERT BREWSTER SEABURY, Clinical Assistant.

SIMON BRETZFELDER KLEINER, Clinical Assistant.

LEONARD CLARKE WHITING, Clinical Assistant.

ARTHUR JOHN ST. LAWRENCE, Clinical Assistant.

CREIGHTON BARKER, Clinical Assistant.

George Burroughs Garlick, Clinical Assistant.

Leslie Adams Wilson, Clinical Assistant.

Abraham Benjamin Rosoff, Clinical Assistant.

Edward Joseph Brennan, Clinical Assistant.

Harold Leland Staples, Clinical Assistant.

THE Section on Surgery had accepted the principle of University Medicine (full-time) from the standpoint of extra-mural practice and professional compensation years before its adoption in any school in the country. The Professor of Surgery had advocated this type of organization, and he himself adhered to it absolutely, even though other members of his staff engaged, to a greater or lesser degree, in extra-mural practice. The conditions at the School, Hospital, and Dispensary, which have been fully described above, did not permit the successful development of such a system and the demands made on this Section by the war were so great that complete reorganization of the Section, improved facilities, and increased budget were essential to renew the activities in Surgery after the war. Nothing could more fully cover this reorganization than the report made by Professor Flint to the New Haven Hospital in February, 1921.*

To Harold W. Hersey, Supt. of the New Haven Hospital:

The annual report of the Department of Surgery for the year 1920 must inevitably involve a brief account of the situation of the service during the war, as it covers not only the beginning of the reconstruction era but also the reorganization of the hospital from a part-time to a full-time basis. Either problem would have afforded sufficient difficulties alone; the two together in an atmosphere of uncertainty, unrest, inflation, and economic disturbance produced a situation that was really formidable. During the emergency, like other institutions, the service was severely handicapped for lack of personnel which placed upon Dr. John W. Churchman, acting head of the Department, and Dr. Willis E. Hartshorn, his assistant, the onerous task of carrying the routine work with a skeleton staff. In the fall of 1919 the service found itself, owing to Dr. Churchman's resignation, faced with the problem of building up an entirely new staff, both professional and technical, upon a full-time basis. The first appointee was Dr. Samuel C. Harvey, Resident in Surgery, and one of our graduates, who shared ably and devotedly the responsibility of this trying period.

STAFF: According to the plan that has been consummated, the staff of the Surgical Service consists of a resident, three assistant residents, and six internes. The general routine and detailed administration of the clinic is carried by the resident, under whom the assistant residents bear the general responsibilities for the wards. A rotation has been arranged in order to make the opportunities of these positions as varied as the material of the clinic permits. One assistant resident and interne is assigned in this rotation to the Dispensary and the Laboratory. It is hoped that this period of rotation, as the service is better organized, will come to be looked upon as a period of scientific leave, and the papers on clinical and experimental subjects can be written up and prepared for publication. The rotation of the internes is on a similar basis. The clinical clerk system introduced seriously for the first time is working out satisfactorily, as it has in other hospitals. The records are better and the opportunity of the student to get in contact with clinical material and the staff is greater than with the old system previously in vogue. It seems only fitting at this juncture to comment upon the enthusiasm and intelligence with which the junior staff accepted their responsibilities during this period of reorganization.

---

* The detailed organization of this section is in every way similar to that of the other clinical sections.

ORTHOPEDICS: At the beginning of the academic session, Assistant Professor Cook was appointed in charge of the division of Orthopedics both in the Dispensary and the Hospital. This service has been amplified by the organization of a machine shop with a competent brace-maker, which is now, after an experimental year, doing admirable work and is of the greatest possible assistance to both institutions. The material in this division, particularly in the Dispensary, is showing a most gratifying increase in attendance.

UROLOGY: The Urological Division for the year has been under the direction of Dr. Graves. The physical equipment and conveniences are undoubtedly as good as in any hospital in the country and there has been in consequence very definite and consistent increase in this subdivision of the service.

NEUROLOGICAL SURGERY: Cases of this group have been assigned to Dr. Harvey who was trained under Dr. Cushing at the Brigham Hospital and who had a wide experience with head injuries during the war.

SURGICAL PATHOLOGY: For the first time an adequate division of surgical pathology has been established. This is of the greatest importance in facilitating the expedition of reports in cases when clinical indications demand them. Dr. Duffy has undertaken the responsibility of this section and the reports are a credit to him and the service.

ARTIST AND PHOTOGRAPHY: With the enlarged staff it has been possible for the first time to utilize photography as a routine method of securing these important records in the most interesting of our cases. These are of value not only from the standpoint of future utilization of this material for publication but also in the work of teaching. Dr. Douglas of the staff, an experienced amateur photographer, has been of great assistance in the development of this aspect of our work. For those cases where more elaborate illustrations are required, the services of the artist of the department are now generally available.

LABORATORY: At the close of the present hospital year, new quarters for the Surgical Laboratory were provided in the Brady Annex. These are entirely adequate and for the first time give the department the conveniences of a physical environment in which proper routine and research can be carried out. The proximity of this building to the surgical wards is likewise of fundamental importance as it enables the staff to salvage short periods of time for the pursuance of more elaborate clinical and laboratory investigation.

RECORDS: As a fundamental problem for the first year's work attention was centered upon the surgical records. The history system has been built up by means of various charts and the records are now for the first time a credit to the hospital. It would be desirable, if it were possible, to have them typewritten. This with the present budget of the department appears impossible, but a step in this direction has been made in the utilization of the clerical staff of the laboratory in typewriting the operating notes, the summary of the cases made by the assistant resident, and the reports of the surgical pathological findings.

ENTRANCE AND DISCHARGE REPORTS: During the year we have developed a system of acknowledging to the patient's family doctor, the reception of the case by the service together with provisional diagnosis. Any important incident in the progress and final diagnosis of the case is reported to the physician upon discharge. Beginnings have been made in a follow-up system but our clerical staff is not yet adequate to handle this very desirable feature of the service as a routine.

CLINICAL MATERIAL: Inspection of the table presented by the historian will classify the clinical material which has been treated by the service during the present year. In the first quarter, the census ran rather low but there has been an encouraging increase in the utilization of the facilities of the hospital which has given us an extremely interesting and varied group of cases. This gives every evidence of improvement as time goes on. At the present time, the wards are filled to capacity and it is safe to predict that in another year or two either we shall have to select cases for admission or the number of beds must be increased. It is particularly gratifying to note that this growth of the service, while in part due to the utilization of the facilities of the clinic by the neighboring physicians, is more directly the result of the recommendation of the hospital by satisfied patients. During the year covered by the report, a total of 830 operations were performed. The total number of cases admitted and treated was 2,178 and the mortality 102.

RESEARCH AND TEACHING: During the first year of reorganization of the clinic, major emphasis has been placed entirely upon the care of the patients. The responsibilities of teaching and of investigation have been considered of secondary importance until the clinic is fully organized up to the limit of the ability of its personnel to care for its patients. Along this line general progress has been made and no one familiar with the hospital under the old régime could help but be impressed with the remarkable improvement that has taken place from the standpoint of care of the sick. Twelve months of work even under trying circumstances that I have outlined at the beginning of this report have yielded most gratifying results. With the idea constantly in mind of improving the work of the clinic from the standpoint of the patients, some consideration can now be given to the development of the teaching part of our responsibilities and productive scholarship. It is hoped that we shall be able to attract men who have both ability and an inclination for research work and that the clinic may offer contributions that will be of real service in advancing in the knowledge of our own particular field of medicine.

Respectfully submitted,
JOSEPH MARSHALL FLINT,
Surgeon-in-Chief.

Professor Flint's resignation in July, 1921, would have created a much more difficult situation had he not so thoroughly organized his Section, and so clearly laid the plans for its subsequent development. His assistant, Professor Harvey, assumed the headship of the department and with an increased budget, succeeded in securing a group of men who are ably carrying on the work started by Professor Flint. The subsection of Urology is now in the hands of a competent surgeon with the rank of assistant professor and is carried on just as successfully as is the subsection on Orthopedics which has continued in the path of development outlined by Professor Flint. The surgical clientele of the Hospital and Dispensary has been materially increased, and it has been possible for the Section to devote much more energy to productive investigative work. As will be seen from the Chart of Organization, there are several other subsections of Surgery besides Urology and Orthopedics; they include Ophthalmology, Oto-rhino-laryngology, Radiology, and Dentistry. Radiology is under the direction of a full-time instructor. The other subsections are organized similarly to the subsections of Dermatology and Neurology in the Section on Medicine. Their future development will follow in exactly the same way as that of the subsections on Medicine.

The courses of study offered by the Section on Surgery are as follows:

The facilities for instruction in Surgery, extending through the third and fourth years, consist of the Surgical Service of the New Haven Hospital, the Surgical Dispensary in the University Clinic, and the Surgical Laboratory. The Hospital service has been entirely reorganized on a full-time basis, with a graduate resident staff, the usual interne service, and the employment of fourth year students as clinical clerks, who form a part of the intrinsic organization of the Hospital.

In the Surgical Laboratory facilities are provided for routine, research, and class instruction. There is an operating room for courses in practical operative surgery making it possible to imitate successfully on animals, the conditions obtaining in a well-regulated operating room. In the research division there are a series of laboratories completely equipped for morphological, physiological, and bacteriological work upon surgical problems, together with an adequate clerical and technical staff. Ample provision is made for the care, under the most humane conditions, of animals that are used in the routine and research work.

The Surgical Dispensary in the University Clinic consists of an adequate suite of rooms besides waiting rooms and the surgical amphitheatre. A new Urological Clinic has been equipped. The Surgical Dispensary has over 10,000 visits a year.

Surgery 1: Minor Surgery and Bandaging.
Surgery 2: General and Special Surgery.
Surgery 3: Minor Surgery and Section Work.
Surgery 4: Dispensary Clinics.
Surgery 5: Hospital Clinic.
Surgery 6: Ward Classes and Clinical Clerk Service.
Surgery 7: Ward Work and Clinics.
Surgery 8: Genito-Urinary Surgery.
Surgery 9: Pathological Demonstrations.
Surgery 10: Anesthetics.
Surgery 11: Operative Surgery.
Surgery 12: Orthopedic Surgery.
Surgery 13: Orthopedic Surgery, Section Work.
Surgery 14: Radiology.

OBSTETRICS AND GYNECOLOGY

Professor Arthur Henry Morse, Chairman.

Assistant Professor Abraham Nowell Creadick.

Margaret Tyler, Instructor.

Luther K. Musselman, Instructor.

Emerson Law Stone, Assistant.

Joseph William Draper, Assistant.

The Section on Obstetrics and Gynecology was reorganized in 1915 on the University basis (full-time). Prior to this, it had been conducted by a practicing physician and was of the usual type of non-productive department caring only for the immediate and practical needs of the patient. In 1918, after the new organization had been in operation for two years, Professor Slemons prepared an article which indicated clearly the lines of development in this clinic and Section of the School.

THE SERVICE OF A WOMAN'S CLINIC TO THE COMMUNITY

The organization of a clinic which may successfully serve the threefold purpose of teaching, investigation, and the care of the sick must be elaborate and therefore is expensive. A Woman's Clinic, which is intended primarily to handle cases of pregnancy and to teach their proper management, but includes also the care of patients suffering from gynecological diseases, must possess various resources, including: first, a free dispensary; second, hospital accommodations for deserving patients who are unable to pay for the treatment they receive; third, equipment for conducting, satisfactorily, cases of childbirth in the homes of the poor; fourth, nurses trained in social service work; and fifth, laboratories where problems related to medical care may be studied.

It should be said at once that as yet in America a Woman's Clinic of this character has not been established, though the type of organization just outlined has been adopted in other departments of prominent medical schools located in large cities. Can the same principle be applied in smaller cities? To this question an affirmative answer has already been given by the experience of the medical departments of universities in the smaller European cities, where some of the most excellent medical schools in the world are situated; and there is no inherent reason why the same result may not be attained in this country. It is true that large cities provide large clinics and make possible the instruction of large groups of students, but smaller ones accommodate smaller groups of students and actually favor the development of what has come to be called "intensive work."

The phrase "intensive work" is used to indicate that the business of a clinic of this sort is the thorough study of the material at hand from every possible point of view. Such a clinic must keep a careful record of the patient's symptoms as she has observed their development. It must make a detailed examination of her physical condition. It must use all recognized laboratory aids to establish the diagnosis. It must inform itself as to the social condition of the patient, for environmental factors must be taken into account in the analysis of many medical problems. And, finally, if a clinic would become acquainted with the results of its own work, if it hopes to improve these results and is ambitious to contribute to the advance of medical knowledge, the clinic must possess facilities for what is known as "follow-up work," which requires the machinery of a social service department. The intensive use of clinical material is distinctly favored in clinics of moderate size. And, where this is practiced, it must be clear that the medical service rendered the individual and likewise the community will most nearly approach the ideal.

During the past two years, it has been possible to apply the intensive principle to the Woman's Clinic of the New Haven Dispensary, which is under the direction of the Yale Medical School. What have been the results? They have been of two kinds: in the first place the quantity of clinical material has increased; and secondly, very gratifying reports have been made by the nurses entrusted with the "follow-up" feature. Prior to the adoption of the method in question, the number of patients treated each year by this department was roundly 400. Following the adoption of the intensive method there was a gradual increase in the number of women applying for treatment, and now the registration of new patients exceeds 650 annually.

The second result, which relates to the character of the work performed, may be illustrated by one of the activities of this clinic, namely, the care of prospective mothers. During the last two years, 392 prospective mothers requested the service of this department. After careful investigation of the physical condition of these patients and of the sanitary surroundings in their homes, 285 of them, it was decided, could safely remain at home for their confinement, while 107 cases were referred to the hospital, chiefly because complications were anticipated at the time of birth. Among these 392 mothers not one was lost; there were no cases of infection which were of a serious character. Among the infants the mortality was less than 5%, which represents approximately half of the mortality usually encountered with random medical care.

The growth of this department proves erroneous the notion that New Haven is too small a place to furnish sufficient clinical material for a medical school. On the contrary, one can say with great assurance that this community will provide ample material for a medical school of moderate size. Even as matters now stand, the Woman's Clinic controls material for teaching purposes one-sixth as large as that available for similar purposes in one of the leading schools of the country, though the latter school graduates about ten times as many physicians as Yale.

It should be emphasized that at present the amount of material available for teaching purposes in this department is largely determined by the physical limitations imposed by scanty hospital facilities; and it is certain that when the hospital facilities are expanded as they should be to equal the facilities of the Dispensary, the material available for teaching will be double.

A Woman's Clinic in this community developed along ideal lines requires: first, a satisfactory number of beds in the hospital to be devoted to cases of pregnancy with its complications, and to gynecological cases; second, laboratory facilities for the study of problems in gynecological diagnosis and treatment; third, facilities for the care of a larger number of obstetrical cases which may safely remain at home; fourth, a staff of physicians and nurses sufficient for careful study of the clinical material; fifth, a building in which the various features of the clinic could be conveniently brought together, coördinated, standardized, and supervised. At present no institution in America has secured an organization embracing all the elements required for effective practice, comprehensive teaching, and productive research in obstetrics and gynecology. From the University standpoint, therefore, the opportunity represents more than the attainment of an accepted standard. It is an opportunity for leadership.*

The war interfered with the development of this section of the School just as it did with that of Surgery, but fortunately not to the same extent. During Professor Slemons' absence on the Continent, the department was in charge of Professor Morse, who had been associated with Professor Slemons for many years, and who was thoroughly conversant with his ideals for the development of the Section. After the war, Professor Slemons returned to the School but remained for one year only. The Section was fortunate in retaining the services of Professor Morse, who returned in July, 1920, to take charge of the work, and entered on the University basis (full-time) in July, 1921. The budget of the Section has been materially enlarged and with the rehabilitation of the East and West Wards of the Hospital, the number of available beds for this Section will be increased, as indicated above. There is still a great need of coördinating the work of the Section.

* From *Yale Alumni Weekly,* March 1, 1918—figures corrected for 1920-21 by Dr. Morse.

The courses of study offered by this Section are as follows:

Instruction in Obstetrics and Gynecology is given during the third and fourth years. The course begins with the subject of Obstetrics during the first term of the third year. The class work includes lectures, quizzes based on a standard textbook, and demonstrations on the obstetrical phantom. During the second term of the third year the subject of Gynecology is taught by means of lectures, quizzes, and ward rounds. Emphasis is placed upon the study of gross and microscopic lesions of the female generative organs and particular attention is given to the diagnosis of uterine scrapings. The work of the fourth year is practical. The students act as clinical clerks in the Hospital wards, as assistants in the New Haven Dispensary and attend patients cared for in the Out-patient Obstetrical Department. During the year each student attends between fifteen and twenty confinements.

Obstetrics and Gynecology 1: Physiology and Pathology of Reproduction.

Obstetrics and Gynecology 2: Operations with the Manikin.

Obstetrics and Gynecology 3: Ward Classes.

Obstetrics and Gynecology 4: Gynecology.

Obstetrics and Gynecology 5: Gynecological Pathology.

Obstetrics and Gynecology 6: Conferences.

Obstetrics and Gynecology 7: Dispensary Clinics.

Obstetrics and Gynecology 8: Practical Instruction.

PEDIATRICS

Professor EDWARDS ALBERT PARK, Chairman.

Associate Professor ALFRED THEODORE SHOHL.

Assistant Professor GROVER FRANCIS POWERS.

ETHEL COLLINS DUNHAM, Instructor.

RUTH ALLINE GUY, Instructor.

MARTHA MAY ELIOT, Assistant.

FRANK LUSK BABBOTT, JR., Assistant.

Assistant Clinical Professor JOSEPH IRVING LINDE.

DONALD WALLACE PORTER, Clinical Instructor.

WILLIAM CHARLES MCGUIRE, Clinical Assistant.

JAMES HAROLD ROOT, Clinical Assistant.

THE original agreement between the General Education Board and Yale University, to place its clinical sections on a University basis (full-time), included the clinical sections of Medicine, Surgery, and Pediatrics. This was subsequently changed at the death of Professor Ramsay when Professor Slemons was selected to take the Chair of Obstetrics and Gynecology so that this subject was substituted for Pediatrics. The Diseases of Children were included under the section on Internal Medicine. A special fund available at the Hospital for a Pediatric Clinic accelerated the establishment of this section in the School and with the beginning of the present academic year, the Section on Pediatrics has been separated from Medicine and made coördinate with the other University sections in the Department of Clinical Medicine. The reorganization in the Dispensary, already effected and outlined above under the appointment system, shows how valuable the work in Pediatrics has been for the institution. At the Hospital, temporary clinical facilities will be increased when the reconstruction of the East and West Wards is complete. At present the Section is greatly hampered on account of lack of both laboratory and ward facilities. However, the instruction in Pediatrics has been very greatly improved, and already clinical investigations under way indicate that important contributions to the prevention and treatment of the diseases of children will emanate from this Section.

The courses of study offered by the Section on Pediatrics are as follows:

Pediatrics 1: Lectures and demonstrations concerning infant feeding and the contagious diseases of childhood.

Pediatrics 2: Hospital Clinic.

Pediatrics 3: Hospital Ward Work.

Pediatrics 4: Dispensary Work.

PUBLIC HEALTH

Professor Charles-Edward Amory Winslow, Chairman.

Ira Vaughan Hiscock, Instructor.

Isidore Sydney Falk, Instructor.

James Cowan Greenway, Lecturer.

Louis I. Dublin, Lecturer.

John Frederick Baker, Lecturer.

The Department of Public Health was established in 1915 on the Anna M. R. Lauder Foundation, the specific endowment for the department being included as a part of the fund raised for the School of Medicine to meet the conditional gift of the General Education Board. The primary purpose which has been held in view in the development of the department has been the provision of a sound training in the fundamentals of sanitation, hygiene, and public health for the regular students of the School of Medicine. The increasing tendency to demand that the physician shall advise the individual and the community how to keep well, makes it essential that medical men should receive much more definite training along these lines than has generally been provided in the past, and thanks to the Lauder Foundation it has been possible for the Yale School of Medicine to meet this need and to devote a total of ninety hours in the undergraduate medical curriculum to the subject of Public Health. It is usual in most schools to place this subject in the second or third year in association with Bacteriology, but at Yale, Public Health has been considered a post-clinical rather than a pre-clinical subject and the course has been placed in the first half of the fourth year, so that it may deal, as it should, in a broad and comprehensive fashion, with the applications of medicine to the organization of the community health service.

A second objective has been the development of graduate courses for the preparation of public health workers, so sorely needed in many different branches of the modern public health campaign. In some universities, schools of public health have been developed entirely separate from and in competition with the school of medicine, but at Yale it has been felt that since prevention tends to assume a more and more important aspect in the teaching of medicine and since the physician with special public health training must always be a central figure in the public health campaign, a close connection with the medical school was essential to the soundest progress. The courses offered in the undergraduate medical curriculum must of course be supplemented by special work in non-medical as well as medical branches, but our effort at Yale has been to build up a school of public health centered about the Section on Public Health in the School of Medicine.

Plans for graduate instruction in this field were consummated in 1919, providing for the organization of a special Department of Bacteriology and Public Health in the Graduate School. The chairman of this department is the head of the Section on Public Health in the School of Medicine and in addition to his own staff he is assisted in the work for the graduate degrees by the Professors of Child Hygiene, Applied Physiology, and of Bacteriology in the Graduate School, by the Director of the Department of Physiology, by the Director of the Department of University Health, by the Professor of Civil Engineering of the Sheffield Scientific School, and by the Professors of Bacteriology and Pathology of the School of Medicine. Three degrees are offered at the present time: the Certificate in Public Health, a one-year course open to medical graduates and to college graduates who have specialized in Bacteriology or other lines leading to public health; the degree of Doctor of Philosophy, the usual three-year course for college graduates; and the degree of Doctor of Public Health, a two-year course for medical graduates only. The success of this general plan is indicated by the fact that twenty-one students are this year registered for graduate degrees in Bacteriology and Public Health.

The special courses offered by the staff of the Section on Public Health in the School of Medicine, all of which are open as electives to medical undergraduates, are as follows:

Public Health 1: Principles of Public Health.

Public Health 3: Principles of Vital Statistics.

Public Health 4: Practical Field Work in Public Health.

Public Health 5: Public Health Seminary.

Public Health 9: Public Health Administration.

Public Health 10: Industrial Hygiene and Sanitation.

Public Health 11: Epidemiology.

Public Health 14: Sanitary Law.

Public Health 17: Microscopy of Water and Foods.

In the past, while these courses have been offered as elective, there has been no opportunity in the crowded state of the medical curriculum for the medical undergraduate to pursue them, and at Yale, as elsewhere, the proportion of medical students devoting themselves to post-graduate specialization in Public Health has been small. It is believed that the modifications in the curriculum described in a succeeding section will make it possible to attract a substantial proportion of medical undergraduates into this field where their services are so greatly needed.

The research activities of the Department of Public Health have been in the main concerned with bacteriological, epidemiological, and statistical studies of the effect of various factors in the incidence of communicable disease and with problems of industrial hygiene, particularly those relating to ventilation and the industrial dust hazard. Work along the last of these lines has been conducted in cooperation with the United States Public Health Service which assigned four of its experts to work in the laboratories of Public Health during the war and has continued the assignment of one of these officers up to the present time.

The Department of Public Health, in accord with the suggestion especially laid down in the deed of gift which established it, has taken an active part in the development of the public health movement in the University, the city, and the state. The chairman of the Department is also chairman of the University Department of Health, which has supervision over the health of all students in the University. He is also chairman of the New Haven Health Center, which is conducting a demonstration health organization program in a selected district of the city, and he has been a member of the State Department of Health since its reorganization in 1917. Members of the departmental staff have conducted intensive health surveys in New Haven, Hartford, Middletown, and Westport, which have led to substantial improvements in health organization in those communities.

In the future development of the Department of Public Health it is planned as heretofore to rely for the public health aspects of physiological chemistry and bacteriology upon the university medical and graduate school departments dealing with those subjects. For Sanitary Engineering it will be natural to continue to rely on the Sheffield Scientific School and, for such predominantly medical topics as the campaign against infant mortality and tuberculosis, on the corresponding sections of the medical faculty. The Department of Public Health will provide all necessary facilities for the teaching of sanitation, vital statistics, sanitary law, public health education, and public health administration. The income from the Lauder Foundation is now practically absorbed by the existing staff of the department and other funds will be necessary for the natural growth which must take place in the future. Among the special needs which seem most pressing are the development of work in tropical medicine, which could perhaps be best organized in the Section of Pathology and Bacteriology of the School of Medicine, and the establishment of an institute of industrial hygiene which should be worked out in coöperation between the Department of Public Health and the Department of Internal Medicine. The peculiar opportunities for service along this line in a predominantly industrial state like Connecticut are obvious.

GRADUATE INSTRUCTION IN CLINICAL MEDICINE

Professor Milton Charles Winternitz, Chairman, Pathology and Bacteriology.

Professor Francis Gilman Blake, Medicine.

Professor Arthur Henry Morse, Obstetrics and Gynecology.

Professor Edwards Albert Park, Pediatrics.

Harold Waters Hersey, Superintendent of the New Haven Hospital.

Associate Professor Samuel Clark Harvey, Surgery.

Associate Professor John Punnett Peters, Jr., Medicine.

Associate Professor Alfred Theodore Shohl, Pediatrics.

Assistant Professor Robert Jay Cook, Orthopedics.

Assistant Professor Abraham Nowell Creadick, Obstetrics and Gynecology.

Assistant Professor Clyde Leroy Deming, Urology.

Assistant Professor Robert Archibald Lambert, Pathology and Bacteriology.

Assistant Professor John Jamieson Morton, Surgery.

Assistant Professor Grover Francis Powers, Pediatrics.

Assistant Professor George Hathorn Smith, Pathology and Bacteriology.

Assistant Professor William Christopher Stadie, Medicine.

The only effective type of graduate instruction that has yet been developed in Clinical Medicine is a by-product of the resident system in hospitals and medical schools. The essential educational nature of this work has never been formally recognized by any university. This well-tried and effective system has been used as the basis for the development of graduate instruction in Clinical Medicine at Yale University, in the form of definitely organized and formalized courses leading to the degrees of Master of Science and Doctor of Philosophy.

DEGREE OF DOCTOR OF PHILOSOPHY

The complete requirements for the degree of Doctor of Philosophy are stated in detail in the catalogue of the Graduate School. For the purposes of this pamphlet it is sufficient to outline the special requirements in Clinical Medicine which are as follows:

Candidates for the degree of Doctor of Philosophy must hold a Bachelor's degree and the degree of Doctor of Medicine from acceptable institutions, and in addition must have served as interne in a hospital for at least one year, and have completed the work prescribed for an Assistant Resident in this department, or work considered equivalent. Ordinarily three years of resident study are required for the degree. In exceptional cases, however, two years of resident work, and one year *in absentia* in preparation of the dissertation may be accepted. By the time the candidate has attained the position of Resident, most of the prescribed work will have been covered; hence the work for the degree must consist largely of investigation, in addition to such courses as may be prescribed by the Department.

The Dissertation: The dissertation should be begun not later than a year and a half before the candidate is to present himself for the degree. The subject must be announced to the department one year before final presentation, and must be approved by the department as a whole.

Examination: A final oral examination upon the major subject of the candidate will be given by the departmental faculty. The candidate should be prepared to interpret and defend the dissertation.

DEGREE OF MASTER OF SCIENCE

Candidates for the degree of Master of Science must hold a Bachelor's degree and the degree of Doctor of Medicine from acceptable institutions, and in addition must have served as interne in a hospital for at least one year. Ordinarily two years of resident study are required for the degree.

Course of Study: The work is divided into major and minor courses, planned to give the student a broad foundation. To accomplish this, minor courses are required in other subjects than that of the major work. Emphasis is laid upon course instruction rather than upon research, although research problems may be taken up by students properly qualified.

The Essay: The essay must be based upon the practical work of the candidate so far as possible, although original investigation is not essential.

Examinations: Course examinations only are required.

PROPOSED CHANGES IN THE CURRICULUM OF THE YALE SCHOOL OF MEDICINE

Prepared by Professor UNDERHILL, Chairman of the Curriculum Committee.

IT is universally acknowledged that one glaring defect in medical education is the overcrowding of the curriculum. During the entire four years of study the schedule as now arranged in most schools is so heavy that the student's time is occupied with prescribed work during the entire day.* He rushes from one subject to another with little or no time for thought, analysis, or assimilation. He is the defenseless recipient of an overwhelming mass of facts which he may or may not be able to correlate. The mental and physical strain involved is severe. The result is not entirely satisfactory.

The cause for this condition is at least twofold. In the first place scientific progress during the last twenty-five years has been so great that each coördinate science in medicine has widely extended its borders. In recognition of this fact the medical course has been lengthened to four years. Again, in the enthusiasm of teaching his own subject, there is the decided tendency for each instructor to overteach—to expect the student to become in turn a finished anatomist, physiologist, pathologist, etc. This it is believed is a fundamental error. Tradition in teaching is the second factor for consideration. It is natural to be conservative, to cling to the old;

* There is, however, another difference between the American and English systems during this period. The broad distinction between them lies in the greater amount of time spent in instructional classes of various kinds in America, the lesser weight given to independent study and the much smaller amount of responsibility which the student enjoys. Nearly every hour of the student's third year is spent either in listening to compulsory lectures or in attendance at classes which are equally compulsory. The compulsion moreover is not due to the school authorities alone; it is endorsed by the State legislature, and is so strictly maintained that State officials actually make rounds of inspection and require certificates that all these compulsory classes are attended by all students. The classes themselves vary in quality. Some are good clinical demonstrations, others may be conducted partly by question and answer on the case demonstrated, but others again, and these even at the hands of reputable and responsible men, are merely question and answer on a chapter of a textbook or on a particular subject which has been set beforehand. In our schools, at any rate in England, a student is in close contact with patients for two and a half years, and though during that time he must attend a certain minimum of lectures and classes they take comparatively little of his time, most of which is spent with patients or in reading. It is characteristic of our teachers to complain that the men do not spend so much time as they might in seeing and examining patients, and that the obsession of the examinations makes them read too much. American teachers on the other hand complain that their men hardly read at all. They are so constantly being taught that they give up all attempt to learn anything by themselves. (Memorandum presented to the University Grants Committee.)

it is difficult to make changes in teaching sufficiently radical to keep pace with progress in science. A case in point is the teaching of the anatomical subjects. In the old days anatomy was the chief subject in the medical course. To-day anatomy is just as important as ever for the study of medicine but other subjects have attained equal or even greater significance.

Morphology (anatomy) is essential, but function (physiology) is equally essential. Yet with the elevation of a group of sciences (physiology, bacteriology, pathology, pharmacology) to a prominent position, anatomy in the medical curriculum still maintains its predominant place as a time consumer—largely because of tradition.

Admitting the validity of the criticism directed against the medical curriculum the query arises, what is the remedy for the evil? At least three possible solutions are obvious:

1. Increase the entrance requirements.
2. Lengthen the period of medical instruction.
3. Make radical changes in the medical curriculum.

In affirmatively considering the first proposition one of two things must happen, either the pre-medical course must be lengthened by the inclusion of medical subjects, or more medical subjects must be taken in the present pre-medical years. Against the first alternative stands the very valid objection of adding another year to the medical student's period of training. This would be most unwise, for the graduate in medicine is already seriously handicapped because of his comparatively late start in the practice of his profession. Secondly, to crowd medical subjects back into the undergraduate years would violate the concept of the ideal physician—a man broadly trained. Even at present the prospective medical student must specialize early in his college course, naturally at the expense of breadth of viewpoint. Any significantly greater specialization would be highly detrimental.

Lengthening the period of the medical course itself brings forth the same objection already considered in connection with the first plan. It is not practicable because of the mature age of the medical graduate.

We believe the remedy lies in the third proposition. The trouble is in the medical curriculum itself, and logically this is where the remedy should be applied. It is proposed by a system of judicious pruning of all the subjects in the school to materially decrease the time of the required courses so as to be able to offer a reasonable minimum schedule of required work of such a nature that the candidate for the degree of Doctor of Medicine shall receive in less time than at present a broad, well-grounded training in the fundamental principles. It is planned that the medical course as now given shall be cut about one-quarter. This would mean that one entire year would be saved, the free time to be equally divided among the four years so that the less capable student will have an opportunity to review and think and the more able student can elect advanced work or investigation. By such a scheme a student, if he so desires, may have considerable free time, may be more broadly but less intensively trained, or may so arrange his electives that he will be intensively trained in one or another of the sciences in accord with his later purposes. As may be seen from this general outline, allowance is made for the development of individuality—all students will not necessarily hereafter fit into the same mould. It is believed that the proposed course will result also in improved teaching, for with less time at his disposal the instructor will naturally emphasize fundamental principles, details will be of less significance, and it is hoped that such a procedure will result in better training of the student by making him more capable of being self-sufficient and independent—prerequisites in scientific medicine. In other words, as one of the members of this curriculum committee has aptly said, we hope "to *teach* the student less, but *learn* him more." By this system it is expected that the candidate for the degree of Doctor of Medicine will be well trained in one or more of the coördinate sciences, for example, he will enter upon his career with the viewpoint of either the physiologist, the pathologist, the pharmacologist, the bacteriologist, etc., whereas by the present system he has no single viewpoint.

Opportunity for research during the medical course deserves consideration. One of the requirements for the degree of Doctor of Medicine at Yale is a satisfactory thesis. On the other hand, no time for its preparation has hitherto appeared on the schedule of studies. In spite of this the theses offered by the graduating classes of the last few years have been exceptionally good; for the most part they have been based upon original investigation, and in the vast majority of cases have been deemed worthy of publication. With time free for research according to the proposed new schedule much more and greatly improved investigation should be possible.

REORGANIZATION OF THE TEACHING OF PATHOLOGY

The teaching of pathology in the United States has suffered greatly from the lack of anatomical material. Gross pathology has not been emphasized. Histological pathology has been elaborated too greatly. This has naturally resulted from the lack of autopsy material. It is relatively simple for an instructor to prepare well organized and detailed courses in histological pathology by accumulating tissues for a period of time, and arranging them to stretch over the course in pathology. It is an easy method, and as such it has appealed to the instructor, and has been elaborated to such an extent that its usefulness, in the present form, should be questioned. On the other hand, the student sees few autopsies, and it is very rare indeed that an opportunity is given him to study the more minute anatomy of the autopsy, which he has seen or participated in. A substitute for the autopsy has been gross morbid demonstration. In most institutions, these demonstrations are not conducted on any well organized plan, but are dependent upon such material as may be available from recent autopsies. The student may see a number of lesions in one system of organs, and none in the others. The instructor does not prepare the gross morbid exercise, and usually demonstrates the organs in a haphazard way, without previous thought or consideration, and without correlation between successive demonstrations.

To criticize this system may seem like heresy, but too often an accepted method is followed without consideration of its evolution or its adaptation to present needs, and too often, as has been the case in this subject, one phase is over-elaborated and another neglected. From the standpoint of the average physician, gross pathology is, if anything, more important than histological pathology, and the correlation of gross and microscopic lesions is essential.

It is proposed to radically change the present method of presenting pathology to place the emphasis on gross pathology, to eliminate the routine staining and preparation of histological material by the student, and to decrease materially the time spent in systematic demonstrations in this phase of the subject. It is of little interest and probably of little importance to the average student of medicine to know the histogenesis of cells, and the more academic questions that naturally arise in the present day discussions of microscopic anatomy do not concern him deeply. It is planned to systematize the presentation of gross pathology through a well ordered series of specimens obtained from post-mortem examinations, the protocols of which, including the clinical history and histological illustrations, are at hand, to coördinate the anatomical condition with the functional changes as far as possible. Further, it is planned to separate general and special pathology more definitely, so that the latter can be distributed over a longer period of time, and presented to the student along with clinical bacteriology when the clinical aspects of a particular disease are being considered.

Steps have already been taken in this direction. The course in bacteriology is now divided so that the student is introduced to general bacteriology in the first year of his study, and special bacteriology is considered with pathology. When, for example, pneumonia is considered, the pneumococcus is cultivated and studied, not only from a bacteriological and serological standpoint, but also from that of the lesions it produces. At the same time, physiological pathology introduced into this country by MacCallum in 1907 and 1908, and elaborated by him, Whipple, Karsner, and others, is presented to the student from a didactic and experimental standpoint. Furthermore, various clinical sections have courses in pathology particularly adapted to their specialty. This is true, for example, of obstetrics and gynecology, surgery and the specialties of surgery. The clinician does not feel that the general concepts crowded into the student's mind during the second year of his study of medicine concerning special anatomical problems and their correlation with human disease, are sufficient, and therefore dilutes his clinical and practical presentation with much more detailed and comprehensive anatomical sub-courses. If this is practical (and it has proved so) for obstetrics and surgery, it should be equally practical for medicine and pediatrics. Of course special pathology would then continue throughout the second and third and possibly into the fourth year of the study of medicine. The present plan of assigning the students in groups to assist at autopsies, to prepare the protocol of the autopsy, to carry out the bacteriological investigations associated with the autopsy, and finally to prepare and study histological preparations from the organs that they have examined grossly, will be continued and elaborated, and technical work previously carried out without much enthusiasm in the preparation of histological slides for routine class examination, will receive much more interest. That better results are attained by this method is assured.

CHANGES IN CLINICAL TEACHING

THE following commentary on clinical teaching in American Medical Schools is of interest:

> The third and fourth years are given up to clinical work. It is at first of an elementary character, and consists of classes on physical diagnosis; clinical classes in the out-patient room fill up almost all the time that is not occupied by lectures. It is not until the fourth year that the student enters the wards.
>
> In surgery, this order is the best, and the treatment of simple injuries such as the O. P. room affords is the best introduction to surgical practice. In medicine it is otherwise. We, in England, recognize that the out-patient room is a place of more difficult study than the wards, and is of necessity less thorough in method. Undoubtedly students should begin in the wards where each case can be examined minutely and at leisure and the student can be trained in the habit of making thorough and complete records. It is even true that the out-patient room needs more experience than the wards in the teacher himself, and while it is perhaps unreasonable to ask the English hospital physician to change places with his assistant, it is most desirable that the two departments should be considered parts of one service, and that while the physician should see cases freely in the out-patient room, the assistant who is likely to have more leisure and to be better acquainted with recent laboratory methods than his chief should be freely employed in ward teaching.
>
> In the fourth year the American student enters the wards for the first time as clinical clerk or surgical dresser.*

The fallacy of the American system concerning the relative importance and time in the curriculum for ward and dispensary study has been recognized here at Yale for several years, and at the beginning of the present academic session, the curriculum has been reversed, so that third year students in medicine spend their time in the wards and fourth year students are in the dispensary. This would have been considered a very radical step even ten years ago, but in that period a great change has occurred in clinical medicine. When the writer was a student of medicine, and for several years thereafter (between 1900 and 1910), clinical medicine was dominated by one science, morbid anatomy, and the aim of the clinician was to diagnose the architecturally completed disease. The realization of the inefficiency of therapy at this stage of disease and the new birth of preventive medicine, with the adoption of more detailed scientific methods in the early diagnosis, has changed the viewpoint.

In the past ten years, schools of Public Health have been created, education of the community has progressed, "life extension institutes" and "group medicine" have been organized, and the teacher of medicine is more interested in prevention and in early diagnosis than in the old architecturally completed disease. There can be no doubt that it is much easier for the students to recognize outspoken stages of disease than to detect disease in its incipiency, just as there is no doubt that, for the proper development of medicine, the completed disease had to be recognized before the earlier stages in the process could be given their proper significance.

---

* Memorandum presented to the University Grants Committee by Sir Wilmot Herringham, K.C.M.G., C.B., and Sir Walter Fletcher, K.B.E., F.R.S., on return from their visit to the United States, May, 1921.

NURSING

Nursing is of so much importance to Hospital-Medical School affiliation, such as has been outlined in the foregoing pages, that a report which does not include this problem would be incomplete. Indeed the medical service at the New Haven Hospital has suffered on account of inadequate nursing and the cost of this nursing, inadequate as it is, has been very great. The following report was completed about a year ago, and submitted through the Board of Permanent Officers of the School of Medicine to the Corporation of the University, the Visiting Nurse Association, the Directors of the New Haven Hospital and Dispensary, and the Board of Managers of the Connecticut Training School.

There are two well recognized and well organized schools for nursing in this community. One is an undergraduate school connected with the New Haven Hospital and known as the Connecticut Training School for Nurses; the other is a post-graduate school connected with the Visiting Nurse Association. The undergraduate school has developed its educational work to a greater extent than has the graduate school, but the graduate school also has laboratory and lecture courses, and recently has introduced into its curriculum a course which is called the "Nursing Institute." This continues for a period of two weeks a year, and the students are taught certain aspects of the work of the Visiting Nurse Association, as well as of public health nursing.

The activities of the Connecticut Training School for Nurses and of the Visiting Nurse Association may each be divided into two distinct parts,—the one, practical nursing, the other, educational. Both of these nursing institutions are affiliated with Yale University. It supplies instruction from its teaching staff, chiefly from the faculty of the School of Medicine, but also from other faculties. The affiliation is a loose one and the instruction furnished is gratis. The organization is unsatisfactory, and as a result the faculties of the University called upon to furnish this instruction and the nursing associations frequently are embarrassed in the effort to meet the very meagre needs in the educational work of the nursing institutions.

The Board of Managers of the Visiting Nurse Association at present believe that the educational feature is a very subordinate part of its work. If this viewpoint continues to dominate, the Visiting Nurse Association will find more and more difficulty in attracting nurses to its corps unless it offers, not only practical manual work, but also "education" in ever increasing amounts. Education for graduate nursing institutions is simply the next step in the development of the training of the nurse.

Dearth of nurses is the most important reason for consideration of the nursing situation at the time. It is improbable, too, that the number will be increased materially unless the field is made much more attractive. This can be accomplished most readily by definite advance in the educational program of nursing institutions. Therefore it is suggested that a school for nursing be developed in New Haven which will be a part of Yale University and which will bear the same relation to the University as does the School of Medicine or any other well recognized school.

In any plan for a University School for Nurses in New Haven, the following must be borne in mind: it would be a fundamental error to attempt to interfere with the activities of the Visiting Nurse Association in the community; it would be equally wrong to interfere in any way with the affiliation of the Training School for Nurses with the New Haven Hospital as far as its practical work in the Hospital is concerned. There remains, however, one aspect of the work of both these institutions, namely, the educational, already loosely associated with the University. This educational work should be under the control of the University through a director or dean. This director or dean should be the best available and obtainable educator in nursing. She should have a governing board to consult concerning curricula for undergraduate nurses of the Connecticut Training School and for graduate nurses both of the Connecticut Training School for Nurses and the Visiting Nurse Association. This governing board should consist not only of a representative or representatives from the School of Medicine and the Department of Public Health, but also of such members of the University Faculty of Sociology, Psychology, Education, and other subjects as would seem essential for the formulation of proper undergraduate and graduate curricula. The Superintendent of the Connecticut Training School for Nurses and the Superintendent of the Visiting Nurse Association also should be represented on the board. They would be the connecting links between the educational and practical work of the nursing school, just as the Superintendent of the Hospital is the connecting link between the Medical School and Hospital.

The educational requirements for admission to a School of Nursing of Yale University would have to be the same as those of other schools of the University. Matriculation would necessitate a high school education when possible, students from the School for Nurses should join already existing University classes. At the completion of the undergraduate course a nurse should receive a recognition from the University by certificate or degree just as a graduate from any other school.

Briefly, the organization of the School for Nursing of Yale University would be the same as that of any other school of the University. It would have a director and a board of permanent officers to formulate the curricula and to requisition instruction from the various University departments for the School of Nursing. This educational superstructure would in no way interfere with the present organization for practical work of either of the two institutions, the Connecticut Training School for Nurses and the Visiting Nurse Association.

Obviously in a training school of the type suggested, there would neither be time nor would it be economic to require certain manual and domestic labor, now a part of the general training of nurses, particularly of undergraduate nurses. To carry out this work, a separate course of much shorter duration and with different preliminary requirements would have to be instituted, or the work would have to be relegated to paid employees such as are used to do this same work in office, factory, or home. The choice between these or other possibilities is difficult, and the question is being discussed broadly at the present time. Unquestionably, the economic aspect will be an important determining feature.

A point to be borne in mind in the creation of these two groups of individuals, the highly trained nurse and the "cleaner," or nurse's helper, is their designation or title. In all probability, the nurse's helper would drop the descriptive term *helper* and would be called *nurse;* this might be a drawback in the development of a higher school for nursing. Perhaps an attempt should be made to find a new name for the more highly educated and better trained individual—the product of such a School for Nursing as is described above.

The local situation would be benefited very materially if the Visiting Nurse Association and the Connecticut Training School for Nurses were grouped together in a new modern structure. There should be provided administrative offices on the first floor, classrooms, and lecture rooms on the second, and dormitories on the upper tier. The project outlined above would be expensive but a nucleus is already at hand. The Connecticut Training School for Nurses has a small endowment; the Hospital has available $200,000 from the bond issue of 1919. It is possible that the educational endowment, or at least the salary of the director for the School of Nursing, could be obtained by the University, but obviously a large sum would be necessary over and above the money already at hand to make a project of this sort possible.

This general outline is suggested simply as a starting point for the development of the nursing situation in New Haven. Some radical advance must be made in order to bring our nursing problem before the world in the proper light, and the plan above outlined is offered only as a basis of departure. It is hoped that some scheme acceptable to all parties concerned may be evolved.

This report was approved by all of the organizations concerned, and it may be of interest to quote the vote of the Corporation:

Voted, that the Corporation looks with approval upon the plan proposed by the Board of Permanent Officers of the Medical School for an affiliation with the Connecticut Training School for Nurses and the Visiting Nurse Association of New Haven, by which it is contemplated that the purely educational side of the nurses' training shall be directed by the University, provided that this plan can be coordinated effectively with the University's work, and further provided that the University shall be relieved of all financial obligations in addition to those now assumed in the training of nurses, and provided also that the necessary scholarship requirements for undertaking University work shall be safeguarded.

With this approval, it has been possible to more clearly formulate the general plan for the organization of the School for Nurses. A high school education would be a prerequisite for admission. The present course should be shortened to approximately two years, and during this period the nurse would have an opportunity to obtain a broader education than is usually offered in Schools for Nurses. At the end of this period, she would be given a certificate and then if her capability warranted, she would be permitted to continue in more specialized training, such as administrative nursing, social service, industrial nursing, etc. At the end of another two-year period, she would be a candidate for a degree of Bachelor of Nursing.

It is hoped very much that this program will appeal and that funds will be available for the endowment of the School and the erection of the necessary dormitory buildings.

NEEDS OF THE MEDICAL SCHOOL, HOSPITAL, AND DISPENSARY

Medical School

(1) Completion of the contingent gift of the General Education Board toward the three million dollar endowment for the School of Medicine.

(2) Educational endowment for Psychiatry.

(3) Educational endowment for Tuberculosis.

(4) Classrooms and laboratories for students in Pathology and Bacteriology.

Hospital

(1) A laboratory for Surgery.

(2) A service building.

(3) A central dispensary.

(4) Extension of the Woman's Clinic.

(5) A new Pediatrics pavilion.

(6) Rehabilitation of the Gifford Wards.

(7) Increased endowment.

Hospital and Medical School

A School for Nurses.

UNIVERSITY OF CALIFORNIA LIBRARY
Los Angeles
This book is DUE on the last date stamped below.

OCT 26 1964

OCT 9 REC'D

Form L9–116m-8,'62(D1237s8)444

UC SOUTHERN REGIONAL LIBRARY FACILITY

AA 001 186 018 6